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The Chicago Medical Recorder

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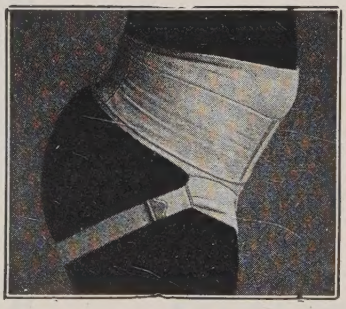

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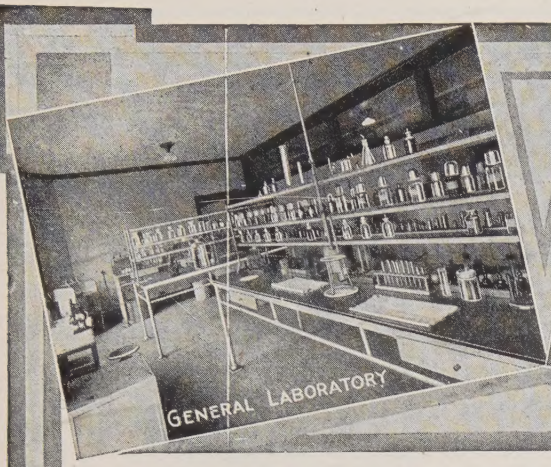

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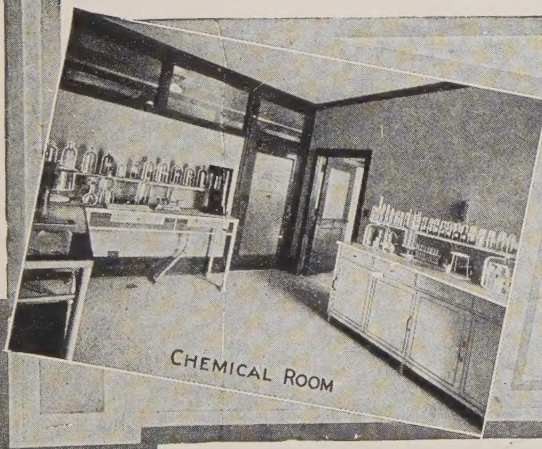

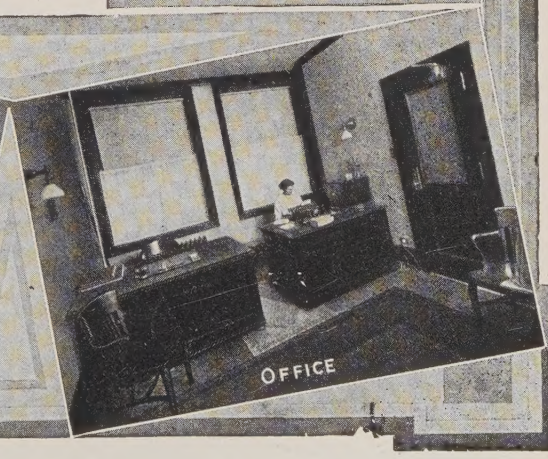

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Contents

Original Articles

Palliative Treatment of Hemorrhoids. By Charles J. Drueck 373
Impressions of Australia and New Zealand. By Franklin H. Martin 378
Symposium of Diseases of Children. By W. A. Mulherin 382
Facts Regarding Pharmaceutical Promotion. By S. Dewitt Clough 387
Abstract Papers 397

Editorials

Sane and Insane as Classified by Society 408
Carbon Monoxide 409
Peace at Last 413

Book Reviews

The Medical Clinics of North America 416
Goiter: Nonsurgical Types and Treatment. Israel Brahm 416
Diabetes. Its Treatment by Insulin and Diet. Orlando H. Petty 417
Anesthesia. James Taylor Gwathmey 418
Rhus Dermatitis. James B. McNair 419
State Board Questions and Answers. Max Goepp 419
The Gall Bladder: Its Past, Present and Future. J. E. Sweet 420
News Items 421
Modern Therapy and Notices 423

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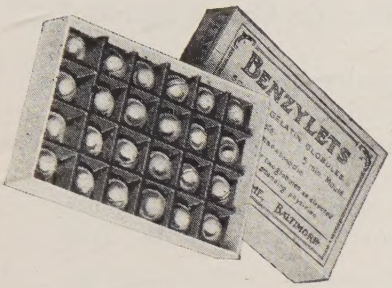

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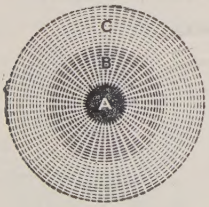

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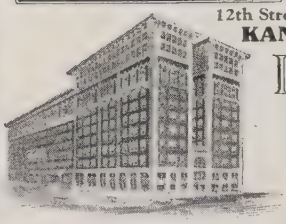

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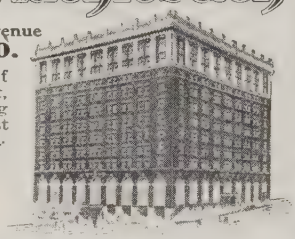

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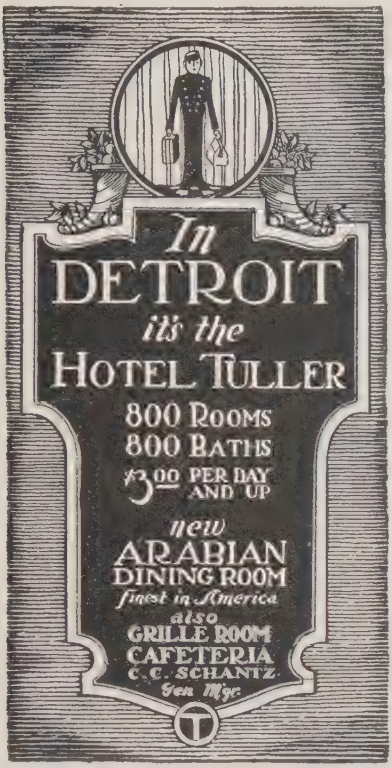

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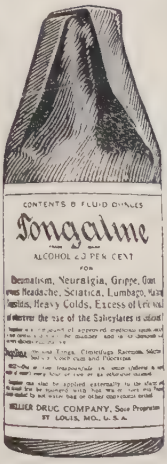

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Original Articles

PALLIATIVE TREATMENT OF HEMORRHOIDS

Charles J. Drueck, M.D., Chicago
Professor of Rectal Diseases Post Graduate Hospital and Medical School

A part of any comprehensive treatment is a recital of the means of prevention not only to avoid the first attack but to prevent recurrences, and also a consideration of the predisposing causes of hemorrhoids with suggestions to inhibit their development. The individual's habits, environments and vocation must be carefully investigated.

In children constipation must be continually anticipated and a gentle dilatation of the sphincter, or a glycerin or soap suppository is often superior to the administration of laxatives. As the child grows up the over use of sugar or pickles or of over eating in general must be guarded against. In adult life, alcohol and tobacco should be discontinued, as also prolonged sitting at stool, great muscular strain and excessive venery. Carbohydrate foods are to be reduced, vegetables and meats continued or increased if need be, and highly seasoned foods interdicted. Constipation in the adult requires constant attention. Active, irritating, resinous cathartics must be avoided. Cold enemas at regular periods if properly given are very effective. If laxatives are given I have had the best results with cascara or rhubarb with malt. If the rectum is dry and fecal masses hard, I have found injections of a few ounces of sweet oil, liquid vaseline or occasionally glycerine to be of much benefit.

From what has been said of the etiology and symptomology of hemorrhoids, it is evident that when hemorrhoids have developed their treatment varies with each case.

So often hemorrhoids are but a manifestation of some other rectal pathology or systemic disturbance, that in every case, no matter how positive we feel that the hemorrhoidal condition is wholly local we always institute a careful examination of the entire rectum, sigmoid and also the liver

and heart. It is only by this means that we can avoid the humiliation of operating upon hemorrhoids due to cirrhosis of the liver, or associated with locomotor ataxia or what is perhaps worse, have the hemorrhoids recur in a few weeks because cancer, stricture or intussusception of the rectum or sigmoid exists.

Hemorrhoids that are amenable to treatment occur under very different conditions and in all classes of patients. There are many methods most of which are good in selected cases and your treatment is half done when you select your case, determine its proper treatment and know what results to expect.

Palliative Treatment. Hemorrhoids may be relieved by palliating where surgical treatment cannot be instituted either because of the patient's refusal, some jeopardizing systemic condition or in aged or delicate individuals. In all of these conditions, unless there is excessive bleeding or strangulation, it is better not to operate but to use local tentative measures, as there is always danger of ebolism, hypostatic pneumonia or phlebitis after operation on such individuals.

If the patient is seen early, where the pathology has not advanced beyond the stage of congestion and dilatation, and if he will exercise the necessary precautionary measures, permanent relief is possible without resort to surgery. This relief, however, can be expected only in those hemorrhoids which are never protruded or in which the protrusion takes place only during defecation and where the piles spontaneously return within the rectum. In both of these stages hemorrhage is the chief symptom, although constipation is almost invariably present.

It is well to remember that where stricture of the urethra, prostatic enlargement, vesical calculus or pelvic neoplasm exist, these conditions must be attended to as a preliminary to the treatment of the hemorrhoids. It is frequently found that one or more of the underlying factors so aggravates or excites the rectal pathology that when they have been relieved a hemorrhoidal operation may be quite unnecessary.

Strangulation. If the hemorrhoids are inflamed and prolapsed, they must first be reduced. The patient should be sent to bed. An upturned chair is placed in a slanting position on the bed and the patient on his knees reclined against the chair. This places him in an extreme oblique position, a posture between the Sims and the knee chest. Fig 1.

Next paint the hemorrhoidal mass with 4 per cent cocaine in 1:1000 adrenalin solution and wait twenty minutes, because the circulation in this edemateous and strangulated mass is slow, and the drugs are not rapidly absorbed. Gravity depletes the tissues, and the patient's position with the thighs flexed relaxes the pelvic muscles so that the protrusion will either reduce of its own accord or may be easily replaced. Of course all of it does not belong within. Probably about one-half does, and a lateral sulcus running parallel with the median raphe will usually be found. Internal to

this line is mucosa and external to it is the skin. This should be remembered because if the whole mass is placed within the rectum the patient will be just as uncomfortable as he was before. That part external to the sulcus is edematous external tissue and sometimes it may be necessary to incise this to deplete it quickly.

After the hemorrhoids have been properly replaced, the whole anal region should be well covered with astringent ointment then covered with gauze compress. It is well to anoint the hemorrhoids with the astringent ointment by means of a long-nozzled collapsible tube. This being much more sanitary than the old fashioned hard rubber pile pipe. The patient is now let down on his bed stretched out prone. The pad and buttock are strapped down with adhesive plaster bandage. If the hemorrhoids are inflamed but not strangulated, they should have a warm slightly antiseptic bath, followed by a cold douche and then the ointment applied. The patient should lie on his face as long as he can. He then may turn on his side with the hips elevated on a pillow or two. Keep the hips up and do not let him lie on his back. This is important because it will arrest inflammation, hasten resolution and relieve pain more effectively than any other remedy. The next day put the patient on his side with his knees well flexed, dilate the sphincter gradually and massage the hemorrhoidal field. Irrigate the rectum and anal canal with sterile water, swab the piles with 1:1000 adrenalin solution and apply the ointment on the outside. If there is much mucous discharge, it will be well to inject one-half ounce of aqueous fluid extract of krameria at night.

An important factor in the protection against recurrent attacks is the arrest of hemorrhage and the prevention of prolapse. The bowels must be kept open each day, and it is a study with each patient to find something laxative but not exhausting. Sulphur is gentle in its action produces a soft, mushy stool, which easily slips by obstructions and allays inflammation by its presence in the stools. Castor oil produces a soft stool, does not create gas and leaves the abdomen flacid. It is a good plan to have the evacuation at night, that the patient may rest after cleansing and dressing the rectum.

Bleeding. Sometimes the hemorrhage is alarming enough to demand attention. It can usually be controlled by rest in the recumbent position Perchloride of iron or nitric acid applied to the bleeding spot will promptly check the loss. When the bleding is in the form of a general oozing an injection of krameria is of much value. If the bleeding is seen to come from a single spot on a prolapsed pile, the bleeding spot may be pinched with a hemostat forceps and a ligature applied just as we would treat a bleeding vessel elsewhere. The ligature should then be cut short and the hemorrhoid replaced within the rectum. No anesthetic is needed for this procedure.

After the bleeding is stopped the bowels should be confined for three days. On the evening of the third day our patient should be given an in-

jection of one ounce of olive oil with instructions to retain it as long as possible. It can usually be retained all night. In the morning an enema of 1 or 2 pints of water with 3 heaping teaspoonfuls of baking soda in it, is given. Just sufficient laxative is given each night from now on to secure a movement each day and an injection of an ounce of olive oil or mineral oil is given each night to soften the feces and prevent cohesion of scybala. By close attention the hemorrhoidal veins are not engorged and the surface of the pile is not abraided by the passage of hard feces during defecation. After each bowel movement a suppository of calomel gr. ½ in cocoa butter should be introduced above the sphincter. Inserting the suppository insures the complete reduction of the hemorrhoid.

If the hemorrhoids prolapse with each bowel movement, but promptly recede, much benefit is obtained by lying down and applying cold compresses of suprarenal extract. If, however, they have to be replaced they should first be cleansed by careful washing with cold water and a soft cloth or sponge then coated with the following ointment and replaced

℞

Ichthyol .....grs. XV
Ung. Ac. Tannici.....dr. II
Ung. Hydrastal .....oz. I

The use of opium or its derivatives for the relief of sphincter spasm or inflammatory pain is condemned

1. Because more prompt and positive relief is obtained by the plans outlined above.
2. It is constipating—the very condition we must avoid.
3. There is danger of acquiring the drug habit.

Pain in the rectum and sphincter spasm are often relieved by the daily passage of a full sized bougie or the proctoscope. With the patient in the knee chest or inverted (Hanes) position, the instrument is passed and allowed to remain within the grasp of the sphincter for ten minutes. If there is considerable spasm it is well to examine carefully for an irritable ulcer.

In this class of sufferers the regular daily use of cold water is of much benefit. After each evacuation an enema of one-half pint of cold water is used to constringe the tissues and tone up the blood vessels and allay inflammation.

The great benefits of the cold water enema in these patients is not nearly apreciated by the general practitioner. Used at a prescribed hour each day the cold water produces an immediate evacuation and seems to regulate this action so that when carried on for two or three weeks the regular defecation continues for quite a while afterward. Elderly and feeble patients derive much comfort from this plan. But following the enema the patient should lie down for half an hour or more to relieve the congestion by assuming the horizontal position and thus permitting the

Figure 1. Patient resting in a semi-inverted position. A chair has been placed in bed at his back to make him comfortable.

blood in the hemorrhoidal and mesenteric veins to be propelled rather than lifted over the sacral promentory and thus avoid the blood stasis.

Among active individuals who must be on the job at a given hour and on the feet many hours, this half hour is not obtainable in the morning and we must consider the advisability of changing the hour of going to stool to as near bed-time as practicable. This will provide the congested and over distended parts the best possible opportunity to regain their normal condition, and in the event our patient is a sufferer from hemorrhoids, the burning, throbbing and general uneasiness produced at the time of defecation will promptly subside and in the morning he may get up and go about his business without any rectal discomfort.

If ulceration exists, subgallate of bismuth, or oxide of zinc will tend to check the hemorrhage and relieve the ulceration. Opium should not be used because it causes constipation. When sphincter spasm is a prominent symptom, it may be relieved by dilation of the sphincters, as will be spoken of later.

Hemorrhoidal sufferers should avoid strenuous exercise, bicycling, riding, automobiling and railway journeys, as these all maintain a position with the thighs flexed, which opens the anus below the internal sphincter, thus loosing the anal support. By careful close attention these patients can usually be made very comfortable but of course it is only tentative and not curative.

By studying the habits and environments of these patients, by the careful use of astringents and analgesics many of them are greatly benefited and symptomically cured.

Many patients are so satisfied with the palliative treatment that they will not consider operative measures, and yet others, who have these recurrent attacks will ask for a radical cure later.

IMPRESSIONS OF AUSTRALIA AND NEW ZEALAND

By Franklin H. Martin, M.D., F.A.C.S., Chicago

If a Royal Commission had been selected two hundred years ago to discover somewhere on earth ideal lands, with an ideal climate, with ideal topography, and with a diversity of resources, it could not have made a better selection than Australia and New Zealand to provide for a superior civilization. These island continents extend from the milder tropics, through the temperate to the milder frigid zones. They have rich agricultural plains that will grow in abundance all sustaining foods; they have rolling hills on which to graze their cattle and their sheep; they have marvelous mountain ranges that furnish all varieties of minerals to the world, and that reproduce the scenery of Switzerland and the beauties of our own Rockies in Canada and the United States. They have thousands of miles of seashore, rugged and beautiful, with capacious harbors for commerce and long stretches of pleasure beaches that recreate the charm of Brighton and Atlantic City. The islands are large enough in area to house an empire of people and to duplicate if not surpass the wealth and culture of the United States or England; and they are isolated enough to make it possible to cultivate an independence that will rid them of the undesirable and antiquated traditions and usages of the older countries.

THE PEOPLE

The people of Australia and New Zealand are our kind of folk. They are predominantly Anglo-Saxon, and they or their immediate forefathers had the vision and initiative to select these far off islands for their future home. They must have had in their make-up not only a spirit of independence, but as well of initiative, of ideals, of frugality, and of industry. This combination in any people molds the character that will peacefully conquer the world. These people are the survival of the fittest of a great civilization, and they create just that impression upon the stranger who visits their shores. The settlers of these far-off countries, after assuming the responsibility of establishing their homes there, have exercised their good judgment and insisted upon keeping their stock pure by refusing to become mongrelized by unwise intermixture of races. The people of these countries, because of the equable climate, live in the open; they develop physically and mentally in the out-of-doors; they are advocates of friendly contest and sports which engender the spirit of fair play; they are predominantly meat eaters, utilizing the stock of their great grazing plains. Physically and mentally, the men are veritable giants; the women are strong and self-reliant, and have great charm and culture of person. These countries have a future of infinite possibilities, which will aid in balancing the peace and prosperity of civilization.

THE MEDICAL PROFESSION

Our party, which sailed from Vancouver on February 8, consisted of Dr. and Mrs. W. J. Mayo, of Rochester, Minnesota; Dr. and Mrs. Richard R. Smith, of Grand Rapids; Dr. Richard H. Harte, of Philadelphia; Mr. and Mrs. J. H. Kahler, of Rochester, Minnesota; and Mrs. Martin and myself. We were fortunate to have planned our visit to Auckland at the time of the meeting of the New Zealand Branch of the British Medical Association. This gave us an opportunity to compare their national conferences with our own. There was an extensive program of papers in the three principal sections—medicine, surgery, and the head specialties. The papers were not unlike those presented at the sections of the American Medical Association. They were practical and well written, and the readers presented them as their individual tastes dictated. Some of them read the entire paper, others made a formal presentation from notes. A peculiar feature of the discussions was the fact that a time limit seemed not to be enforced. However, those who entered into the discussion had made careful preparation, and they usually spoke from notes. The discussions were comprehensive and exceedingly interesting. There was a noticeable absence of the senseless habit of inflicting complimentary remarks upon the essayists, which so frequently prevails with us.

There are local branches of the British Medical Association in all of the principal cities of Australia and New Zealand which have an affiliation with the mother society, corresponding to our country medical societies.

At the meeting in Auckland we met in an intimate way a great many of the medical men of New Zealand, and also a number of prominent physicians of Australia. There is but one statement that will adequately express our opinion of the medical men of Australia and New Zealand, and that opinion we had formed in advance of our visit. They are men educated and trained in an empire that has developed some of the highest type of medical scientists, and they are not one whit behind their confréres of the countries overseas. In a rapid visit such as we made, we could not meet all of the individual members of the profession; but judging those we did not meet by the leading surgeons whom we visited personally, and who discussed the problems of medicine and surgery, these island continents are most fortunate in the type of men who are members of the medical profession. There is one criticism that we might offer, and that reflects credit upon them: They have too long allowed themselves to be imposed upon by benevolent governments and municipalities by giving the greater portion of their services gratis, and not infrequently to individuals who are abundantly able to pay for the professional services which they receive as they do for the hospital advantages which they enjoy.

The medical schools which we visited we found to be of a very high type, the faculties having upon them the leading men of the profession.

HOSPITALS

The general hospitals that we saw in Sydney, and Melbourne, Australia, and in Auckland, Napier, Wellington, Christchurch, and Dunedin, New Zealand, are of the best rank in equipment and efficiency. There is a prevalence of general hospitals in the two countries which are conducted much along the same lines as the great hospitals in London. They are exclusively for the pauper poor and for those who are able to pay a small fee for hospital care. The members of the acting or "honorary" staffs serve without compensation, and they are not allowed to receive fees from the pay patients of the hospitals. This anomalous state of affairs compels the most competent physicians and surgeons in the two countries to utilize private hospitals, some with inadequate facilities, and thereby places the conscientious man of the profession at a great disadvantage because he is unable, without great effort and inconvenience, to provide for his patients of means the same facilities that are accorded to the poor in the general hospitals. The people of means themselves are at an even greater disadvantage, as the private hospital is, consequently, a last resort for them instead of the haven of opportunity which is afforded by the hospitals of Canada and the United States.

I think we may safely anticipate that these great island continents of the southwest Pacific, which have shown so much independence of action in the establishment and conduct of their governments, will exert in the not distant future the same initiative and independence in the organization of their hospitals by breaking away from the obsolete traditions of Europe. The members of the medical profession, especially those who have observed hospitals elsewhere, are fully aware that their hospital system is hampered by traditional drawbacks, and they are extremely anxious to work out a plan that will preserve all of the advantages of the old and obtain the advantages of the new.

The system which they have adopted in their training schools for nurses is rational, and judging from our cursory visit, the nurses are of the highest type of young woman. The laboratories, including the x-ray equipment, are under competent direction, and they should be productive of the best results. They have not yet attained the high degree of efficiency in the keeping of their case-records that we demand in Canada and the United States; but those interested in the management of their hospitals are exercising every effort to improve the system of record keeping.

The superintendents of the hospitals are trained medical practitioners, and their assistants, as a rule, are younger physicians. They have organized medical staffs; but staff meetings, where developed at all, are rather in the nature of clinical society meetings than for the purpose of discussing the professional conduct of the hospital.

THE WORK OF DR. N. D. ROYLE AND DR. JOHN HUNTER

Dr. W. J. Mayo and I spent one afternoon in the experimental laboratory of Dr. John Hunter, the young Professor of Anatomy, University of Sydney, and Dr. N. D. Royle, Honorary Orthopedic Surgeon to the Lewisham Hospital and the State Children's Relief Board. Their work has attracted much attention, dealing as it does with the influence of the sympathetic nerves in spastic paralysis. They first showed us their microscopical specimens, and then led us to their experimental laboratory where they demonstrated their decerebrating operation on a goat, and the effect upon the muscles of the lower extremities as the result of severing the sympathetic nerve control by dividing the ramus communicans, which connects the spinal cord with the sympathetic ganglion. Later they took us to their lecture room and showed us several reels of films which demonstrated their experimental work and the result of Dr. Royle's surgery in spastic-paralysis cases.

Dr. Royle then took us to the Clinic and presented a dozen patients with spastic paralysis whom he had asked to present themselves. Everything we saw impressed us with the importance of the work of these two young men, and the conscientious care with which they are carrying it out. Dr. Hunter, the anatomist, is not more than twenty-seven years of age, and his manner of presenting his work showed him to be of unusual caliber. Dr. Royle, the surgeon, is about thirty-five years of age, and has the respect and admiration of all of his contemporaries. These men will visit the United States in October as the guests of the Clinical Congress of the American College of Surgeons. (Those interested in this epoch-making work may read the latest articles in the Medical Journal of Australia for January 26, 1924, and June 14, 1924.)

ENTERTAINMENTS

Everywhere we received a warm welcome and every hospitality that we had time to accept was ours to enjoy, whether tendered by the government, cities, medical societies, universities, hospitals, or individuals. In almost every city we visited we were entertained by the various civic clubs, and on each occasion one or more, and sometimes all of the men of our party were expected to respond to the toast to the American visitors.

In Auckland we were the guests of honor at a dinner in the Government House, given by Their Excellencies, the Governor-General and Viscountess Jellicoe of New Zealand. We considered ourselves fortunate in being entertained by this brilliant figure of the late war, the hero of the Battle of Jutland. The Mayor and Councillors of Auckland, who entertained the members of the New Zealand branch of the British Medical Association, also invited us as honor guests.

Through plans made by our friends we enjoyed about six hundred miles of motoring in New Zealand. On the northern island we motored

from Rotorua through the thermal regions and over three ranges of mountains to the sea at Napier, an experience that included unusual scenery, and a thrilling ride of nearly two hundred miles. On the southern island we motored to Lake Wanaka at Pembroke and to Mount Cook, in the premier mountain range of New Zealand. These trips were most enjoyable as they gave us an opportunity to see much of the sheep and cattle raising industries, to see the people as they live on the far distant stations in the interior country, and, finally, it gave us time to contemplate and to rest from our arduous week of meetings and entertainments.

In Auckland, Dunedin, Christchurch and Wellington our spare time was occupied with private and semi-public dinners, luncheons, and teas.

In addition to our sight-seeing and professional engagements in Melbourne our time was well filled with interesting functions, social and professional. One afternoon we were the guests of a group of surgeons and their wives in a forty-mile drive to Black Spur, a resort in the foot-hills, near which is a state reservation for the aborigine bushmen! Here we witnessed expert spear and boomerang throwing by the natives. Here, too, we saw many of the animals of Australia which are rapidly becoming extinct, and which show the embryonic type actually functionating.

From Sydney, as guests of the State, we motored to the Blue Mountains and the famous Caves of Jenolan. The car provided for our use was a magnificent one, luxuriously accommodating fourteen people and their baggage. The trip required two days, and is one of the great sights that should not be ignored by ambitious travelers. The caves are approached by a picturesque mountain drive from the coast, through vineyards, and sheep and cattle stations, to the foot-hills covered with summer homes, and, finally, into rugged mountains where lie the famous Caves of Jenolan, which are most wonderful and extensive. This is only one of several delightful experiences we had during our stay in Sydney.

Thus everywhere on the three continents we were official guests of the federal, state, and civic governments, and were given flattering receptions by the medical societies, the hospitals, the universities, the civic clubs, and most markedly by the medical profession as organizations and as individuals. The women of our party were enthusiastically entertained at luncheons, teas, dinners, motor rides, theaters, and the opera. The warmth of hospitality of these people can never be forgotten by the pilgrims from the United States of America.

SYMPOSIUM OF DISEASES OF CHILDREN*

Acidified Milk with Karo Syrup as an Infant Food

W. A. Mulherin, A.M., M.D., Augusta, Ga.

There has existed, from time immemorial, the necessity for the artificial feeding of infants. While breast milk today is advocated first, last and always, when it be a practical and logical procedure; the death of the mother, the wear and tear of childbirth on the physical strength of the mother, the occasional abandonment of the baby, not infrequently necessitates a resort to artificial means of nourishment. Upon how well artificial feeding is done will frequently depend the health, happiness and even the life of the baby. A responsibility that should not be accepted too lightly by any physician.

OLD THEORY AND PRACTICE

Until very recently the principles underlying all accepted and approved methods of artificial feeding of infants have been about as follows: Cow's milk is the next best food after mother's milk, it contains all the ingredients possessed by mother's milk. The ingredients of cow's milk are more difficult of digestion than those in human milk, especially the fats and proteins. It was taught that the difficulty in digesting the fats and proteins of cow's milk was due to biological and chemical differences existing in the human and cow's milk, mainly in the fats and proteins. Therefore in order to make the fats and proteins of cow's milk more digestible water was added to dilute them. Sugar or starch (barley flour, etc.) was then added in order to enrich the milk sufficiently to nourish the baby. The mineral or inorganic salts in cow's milk were completely ignored. It was claimed that these salts practically had no effect on digestion and might be figured as one-fifth the amount of proteins in formula, and were deserving of no further consideration.

NEW THEORY AND PRACTICE

The principle of the new theory in artificial feeding of infants is directly opposite to that of the old one. The mineral or inorganic salts in cow's milk receive first consideration. As is well known these salts are three and a half times as numerous in cow's milk as in breast milk. These mineral salts act as a "buffer substance," that is a substance that absorbs, or neutralizes, the hydrochloric acid in the gastric secretions. The phosphates and calcium caseinate are the chief buffer salts in cow's milk, two-thirds being present in the casein and one-third in the whey protein. These buffer salts absorb or neutralize a definite amount of the hydrochloric acid in the gastric secretions, and just in direct proportion to the amount of their neutralization do they interfere with digestion of cow's milk. The fats and proteins are ignored in the new conception of artificial infant feeding, the same as the inorganic salts were ignored in the old method.

It is claimed that the physiological properties of hydrochloric acid in

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the process of digestion are to stimulate motility of gastric and intestinal muscles, to open the pylorus, to stimulate the flow of bile, pancreatic and intestinal secretions, to promote absorption of fats, proteins and mineral salts, and to inhibit bacterial growth. Therefore the big idea in the new method of artificially feeding babies is to neutralize the buffer substance (mineral salts) in cow's milk and thereby allow the hydrochloric acid in the gastric juice full sway to exert its favorable influence on the digestion of cow's milk. Theoretically, if it be the buffer substance in cow's milk that prevents it from being as digestible as mother's milk, the removal or neutralization of these inorganic salts should permit us to feed full strength undiluted cow's milk to newly born babies and even to premature babies. Practically this is just what is accomplished by the neutralization of the buffer substance in cow's milk.

HOW TO REMOVE BUFFER SUBSTANCE

The inorganic salts (buffer substance) can be neutralized by acidifying the cow's milk. Cow's milk can be acidified in three ways: 1. The natural way of allowing milk to sour—lactic acid germs from the air deposit themselves in the milk and, acting on the sugar in the milk produce lactic acid. 2. Culturing cow's milk with lactic acid bacilli, such as lactic acid bulgaricus cultures, lactone tablets, etc., and incubating them a varying length of time. 3. Adding to cool, or cold, cow's milk, lactic acid U. S. P. (75 to 80 per cent) in the proportion of one teaspoonful (60 drops) to each pint. It is important in adding lactic acid to cow's milk that the milk be cool, or cold. also that the lactic acid be added drop by drop, gently stirring the milk all the while. If this procedure be neglected large lumps of curds will form which will make the milk unfit for use. Faber, of San Francisco, advocates the use of one-tenth normal hydrochloric acid in acidifying the milk, the proportion used is one ounce of tenth normal hydrochloric acid to each four ounces of milk. He claims for this procedure that the milk is more palatable than when made with lactic acid. He, however, forgets the fact that acidifying cow's milk with hydrochloric acid requires a relatively large amount of hydrochloric acid to be ingested by the infant. This amount of hydrochloric acid might easily disturb the acidbase equilibrium of the baby's bodily fluids and tissues, also hydrochloric acid is not burnt up in the system, as is the case with lactic acid, and therefore throws an unnecessary strain on the eliminative organs, especially the kidneys. For this reason lactic acid is the acid of choice used by those feeding acidified milk to babies.

HOW TO MAKE LACTIC ACID MILK WITH KARO SYRUP

Thoroughly shake one quart or one pint of fresh cow's milk, for the purpose of well mixing the cream with the milk. Boil for five minutes the amount of milk needed in the formula, in order to sterilize the milk. Put the milk on ice until it is cold—milk must be cold when lactic acid is added. Remove the scum from the milk. Add enough boiled water to take the

place of water evaporated whilst boiling, so as to finish with the amount of milk with which you began. Slowly add, drop by drop, one teaspoonful (60 drops) of lactic acid for each 16 ounces of milk in formula. Gently stir milk while adding lactic acid. Thoroughly dissolve in the milk two level tablespoonfuls of Karo syrup (Blue Label) for each pint of milk in formula. More Karo syrup may be used for the average baby if digested. Divide the formula into the desired number of feedings, with requisite amount in each bottle. Keep on ice and warm to blood heat as needed.

Acidified milk with lactic acid, U. S. P. has the advantage of carrying a definite acidity (P. H. 3.75). Breast milk removed from a healthy baby's stomach two hours after nursing, which is supposed to represent the ideal acidity at the height of digestion has been found to carry an acidity of P. H. 3.75. Therefore, artificial buttermilk made by the addition of lactic acid U. S. P. has the advantage of carrying a definite acidity, while buttermilk made by nature's process, or by inoculation of the milk with lactic acid bacilli, has a decidedly varying degree of acidity. Therefore, artificially made buttermilk is the one of choice in making acidified milk for babies.

Why use Karo syrup? Because it is chiefly corn syrup, containing dextrin 55 per cent, maltose 30 per cent, glucose 15 per cent. One ounce of Karo by volume (2 tablespoonfuls) is equivalent to one ounce of sugar. The calorie value is 120 an ounce, or 60 calories for each level tablespoonful. It is the most difficult of the sugars to ferment, therefore less likely to cause diarrhea. It is better tolerated by the infant's digestive organs than are the other sugars, and is more easily assimilated. Dextri-maltose is very similar in composition to Karo syrup (Blue Label), but somewhat more expensive.

Karo syrup is added to acidified milk because sugar in cow's milk is low (4.75 per cent) compared to mother's milk (7.50 per cent). Nature shows us, by an analysis of mother's milk, that babies digest sugar quite easily, and physiology teaches us that it is the chief ingredient that fattens babies.

Caloric value. The caloric value of acidified cow's milk, with two level tablespoonfuls of Karo syrup (Blue Label) added to each pint equals 27.5 calories per ounce. Mother's milk contains 20 calories to the ounce. Therefore acidified milk with Karo syrup is a more concentrated and a higher caloric value feeding than is mother's milk.

Digestibility. After an extensive trial it is my conviction that acidified milk with Karo syrup is practically as digestible as mother's milk. Newly born babies have no trouble in digesting it, they thrive in a natural and healthy manner, and will gain in weight similar to breast fed babies. I have at present, at the Children's Hospital, a premature seven months baby weighing three pounds. He is taking lactic acid milk with Karo syrup and digesting it perfectly, and is thriving normally. This case is an ideal one with which to test out the digestibility of this feeding, for not

infrequently mother's milk has to be diluted with water in the feeding of such cases.

Scope of usefulness. Lactic acid milk with Karo syrup can be beneficially fed to sick babies the same as to well babies. It is especially helpful in malnourished and marantic babies, for the reason that it is easily assimilated and is of high caloric value. It is an ideal food to give as an additional food (complemental feeding) when mother's milk is not wholly sufficient. It is the feeding of choice when strictly artificial feeding has to be practiced. Owing to its inhibitory action on the growth of bacteria it is an especially good summer feeding. Lactic acid milk has been inoculated with bacilli dysenteriae, and in 24 hours no growth could be recovered. Babies fed on acidified milk with Karo syrup, that develop ileocolitis or diarrhea can be more successfully treated. In such cases if the Karo syrup is left out of the formula and instead dry protein milk (Casec) is substituted, the frequency of stools will gradually diminish and the baby will continue to be fairly well nourished.

Contra-indication. As yet no contra-indications to the use of lactic acid milk are known. Some babies do not like sour milk, but if the food is offered regularly the pangs of hunger quickly overcome this difficulty.

RESULTS

The value of all methods of infant feeding should be gauged by the results obtained. W. McKim Marriott of St. Louis, Mo., a medical genius who is giving to the world today the leading thought in pediatrics, is the father of this method of feeding. He has, for the last two years, fed 90 per cent of all babies received in the wards of St. Louis Children's Hospital with lactic acid milk and Karo syrup. His cases were not selected, but were the usual run of difficult feeding cases, and babies ill with various infections, premature babies were also included in his study. With the entire group the average daily gain in weight was 28 gm. (9-10 oz). When we consider that the average gain in weight for the normally thriving breast-fed baby is one ounce daily, it gives us an idea of the brilliant results obtained by him, with this feeding, with these ill babies. Just as striking were his results with his marantic babies. In 1919 his mortality with morantic babies was 78 per cent, last year it was 26 per cent.

Personally I have tried acidified milk with corn syrup in private practice, hospital service, out-patient clinic, and preventive pediatric clinic, and my results have been similar to those obtained by Marriott. I feel justified in recommending to the profession this newer method of artificially feeding infants. The principle on which it is based is a logical and sensible one. The method is simple and more fool-proof than previous ones. It is an easily digested, concentrated and high-caloric value feeding. In my humble opinion it has come to stay, for it is a godsend to the physicians and a life-saver for the babies. It will simplify many of your problems in infant feeding. I feel assured a thorough trial will yield you the same good results it has given to those who are using it.

FACTS REGARDING PHARMACEUTICAL PROMOTION*

By S. Dewitt Clough

What people are seeking today are facts.

In every art, industry and profession, there is an earnest search for more facts.

Advertising and sales management are becoming more efficient through the study of fundamentals.

Markets, distribution, buying habits, territories and merchandising methods are being analyzed to eliminate lost motion.

The necessity for a more exact knowledge of the principles and psychology of advertising is apparent to all who have given this matter serious thought.

Cutting Out Waste

If ten per cent of the waste in advertising could be eliminated, it would mean an annual saving of one hundred million dollars to business in this country.

If ten per cent of the waste in advertising to physicians alone could be cut out, it would save the members of this association approximately five hundred thousand dollars a year. This is worth considering.

You would be rather careful about a personal investment of ten thousand dollars. You would give a lot of study to a business investment of one hundred thousand dollars. You would give even more thought to the erection of a plant, office building or factory costing two hundred thousand dollars.

Years of research, costing from ten to one hundred thousand dollars are given to a single product, before it has even been offered for sale. Should similar large sums of money be spent for advertising and sales work without equal amount of research and investigation?

Advertising is vital to permanent sales and all business is based upon sales.

This subject should not be sidestepped, neglected, passed upon lightly nor delegated to a person of little experience, or one with a superficial knowledge of your business. It is the most important factor in your continued success.

Your profits this year, and every year, will depend in a large measure upon the efficiency of your advertising and sales methods. As the percentage of net profits to gross profits is reduced, there is greater need for more efficient methods.

Babson points out the fact in a recent bulletin that the percentage of net profits to gross profits of thirty industrial companies has steadily declined since 1916. He remarks "The problem is not simply to get more

*Read at meeting of the American Drug Manufacturers Assn., New York City, April 9, 1924.

sales, but to be sure that the additional sales can be obtained without raising the cost ratio."

To some, economy in advertising means merely cutting down advertising. It has been proven that this is neither a forward looking policy, nor is it good judgment.

One firm, when written to for the purpose of this paper, stated that all advertising had been cut out since the war, and that their sales had increased 500 per cent. I am not familiar with the details of that business, but I venture to predict that if this policy is pursued there will not be much of this business left to advertise by the time the next war rolls around.

You can't starve a cow and expect a record-breaking milk yield. Your estate cannot collect on your life insurance, unless you pay the premiums. A slow, but sure, method of business suicide is the elimination of all promotion.

Questionnaire to Members

My first thought in presenting some facts of practical value on the promotion of pharmaceutical products, was to send a questionnaire to all the members of this association. This was done and fifteen replies were received. This did not appear to be sufficient data for the purpose I had in mind. My object was to determine, as accurately as possible, the most effective methods of advertising and sales promotion. The replies received were interesting and furnish some important data, which I shall give you.

Questionnaire to Doctors

The thought then occurred to me that in the last analysis the doctor was the one we should approach in securing this information. So a questionnaire was sent to five thousand doctors in every state in the union, as equally divided as possible, among the small towns and the large towns. About 788 replies were received up to the time this paper was written. The results are wonderfully interesting. Never, as far as I know, has such an extensive survey been made to the medical profession on the subject of advertising. The results are astonishing in that they point the way to saving even more than the ten per cent, previously mentioned.

The letter sent out to these doctors was as follows:

PERSONAL

March 10th, 1924.

Dear Doctor:

The largest pharmaceutical houses in the United States are holding a meeting in New York City next month.

You have been requested to contribute to the program in this way: the writer is preparing a paper on the "Promotion of Pharmaceutical Products." You can greatly assist by contributing your opinions as suggested in the attached "Confidential Questionnaire."

This will be a wonderful help, because in the last analysis you are the judge of what is most effective in pharmaceutical promotion.

Your early response will be very much appreciated as the meeting is only four weeks off.

This information will, of course, be held strictly confidential. A stamped return envelope is enclosed for your reply.

Thanking you in advance, I am

Very truly yours,

S. DeWitt Clough,
Sales Problems Committee,
American Drug Manufacturers' Association.

The questionnaire read as follows:

CONFIDENTIAL QUESTIONNAIRE

1—What method of advertising to physicians do you consider most effective?
A—Letters.
1—Filled in?
2—One or two cent stamp?
B—House Organs?
1—How many times a year?
C—Samples?
1—How many times a year?
D—Medical Journals?
E—Exhibits at Medical meetings?
F—Booklets: What size?
G—Post Cards?
Additional Remarks. What form of pharmaceutical promotion appeals to you most?
2—Do you interview detail men and is their work effective in your opinion?
3—Do you think the American Drug Manufacturers' Association and allied associations should interest themselves in a campaign of publicity to create a better understanding, greater goodwill and more complete confidence on the part of the public toward the regular medical profession?
4—Would such a campaign be effective, in your opinion, in checking the tendency of the public to drift to the cults and directing the attention of the laity to the physician and his accomplishments?

THE RESULT

Four hundred and eleven replies were received from small towns and 377 from the larger cities. Every state in the United States is represented among the replies, and the distribution, as you will see, is about equal between the towns and the cities.

SAMPLES

The votes for the various forms of promotion are most interesting. Samples received the largest number of votes- 576, only 62 doctors voting

against samples. The comments on the use of samples were very illuminating. A large number of doctors stated that the samples they received were too small to be of any practical value. They agreed that if samples of sufficient size were sent with information as to the uses of the preparation, its formula, or principal constituents, with brief directions for its use, it would be tried out. One sample at a time was preferred. Some doctors preferred to have samples with literature left with them by detail men, some preferred samples through the mail with short letters and literature. Other doctors mentioned the fact that they preferred samples of new preparations only. Some doctors stated they desired clinical data and liberal reports to accompany samples. It is evident from an analysis of all of the votes, that samples are held in high esteem by a very large part of the profession and that this is one of our most effective methods of promotion.

Sampling Effective

It may be thought by some that there are a great many doctors who like to get something for nothing and who fall into the class of sample fiends. While undoubtedly there are some of these doctors and these would be among the first to answer a questionnaire, the fact that 576 out of a total of 788 doctors voted for the samples, it is sufficient evidence, in my opinion, to prove that the use of samples is of great value. About 60 per cent of the pharmaceutical firms answering the questionnaire, stated that they used samples. The custom with most houses is to sample one specialty at a time, according to the season, either by mail or detail men. Some firms sample the entire profession two or three times a year, other firms work one district at a time.

In reply to the question "How many times a year should samples be sent," there were hundreds of replies, ranging all the way from once a year to twelve times. The average, however, is three times a year and this corresponds to the experience of a number of firms. One firm stated that 14 per cent of its advertising appropriation was spent in samples in 1923. Other firms have no consistent policy. They send samples only upon request and as trade circumstances seem to require.

Some few doctors stated that they believe in sending samples only upon request. In reviewing the success of a number of well known pharmaceutical specialties, it is apparent that their present popularity, large volume of sales and wide distribution is due to the production of large distribution of samples to the medical profession to three and even four times a year.

Medical Journals

The method which received the next largest number of votes was medical journals, 499 doctors voted for this method of promotion, 57 doctors "No." Contrary to the general belief, only a very few doctors stated that they did not read the advertising in medical journals. Seventy doctors

specifically stated that they considered this the best method of pharmaceutical promotion. Some few doctors specified the journals they preferred and some others stated that they preferred ads giving a brief description, clinical reports and practical data. It is evident from the large number of replies on this subject that the doctors *do* read their medical journals and are *influenced by the advertising pages.*

Ninety per cent of the pharmaceutical firms returned the questionnaire stating they used medical journals not particularly for the direct results obtained, but for the prestige, good will and insurance value of this advertising. It is true that the results are often difficult to check, but it is also true that the larger pharmaceutical houses have used a large number of journals for a great many years and find that it dove-tails with their own detailing trade promotion and other methods of follow up. In introducing new products, as well as keeping old products before the profession, medical journal advertising is, without a doubt, an effective, important and necessary form of promotion. The number of journals to be used would depend, in a measure, upon the size of the appropriation, territory to be covered, the nature of the product and the purpose for which this advertising is intended.

Exhibits

A surprisingly large number of doctors voted for exhibits. This method of promotion was third on the list. Four hundred and seventy-six doctors voted for exhibits and only 54 "no." It is evident, however, that only a few doctors consider this the *best* method of advertising. It is a valuable auxiliary method and so commented upon. The objection to exhibits seems to be that comparatively few doctors attend medical meetings and that the expense is often out of proportion to the results. It is, however, evident that a very large proportion of the doctors are interested in exhibits and that this method of promotion is popular.

House Organs

In reply to the query on house organs, 332 doctors voted "yes" and 91 "no," for this type of advertising. It ranked fourth on the list. The consensus of opinion among those doctors commenting upon this question, seemed to be that house organs should be mailed at least four times a year. Comments as to the character of house organs were interesting. It is evident that physicians want facts, laboratory reports, dependable clinical data and authoritative excerpts to substantiate claims, made for a new product or one they have never used. They want house organs, both attractive and easy to read, short, terse, well written and to the point. They want pocket-size facts.

Of the 15 pharmaceutical firms in this association, answering our questionnaire, 6 use house organs. One firm publishes a monthly house organ with complete coverage—a return card is always inclosed. Another firm

411 replies from small towns.
377 replies from large cities.
576 doctors voted for samples.
62 doctors voted against samples.
499 doctors voted for medical journal advertising.
57 doctors voted against medical journal advertising
476 doctors voted for exhibits.
54 doctors voted against exhibits.
332 doctors voted for house organs.
91 doctors voted against house organs.
294 doctors voted for booklets.
124 doctors voted against booklets.
123 doctors voted for postcards.
270 doctors voted against postcards.
317 doctors voted for letters.
127 doctors voted against letters.
302 doctors voted for 2-cent stamps.
15 doctors voted for 1-cent stamps.
631 doctors said they interviewed detail man.
110 doctors said they did not see detail men.
615 doctors voted in favor of an educational advertising campaign.
110 doctors voted against such campaign.

Order of Choice

1—samples.
2—Medical Journals.
3—Exhibits.
4—House Organs.
5—Letters.
6—Booklets.
7—Postcards.

Good detail men, backed by other forms of promotion, in the order shown, is thought by the doctors to be the most effective sales method.

sends out a house organ 11 times a year to customers and to prospects when the occasion demands. Three other firms reported good results from house organs used twice, three times and four times a year, in quantities of from 50 to 100,000. In the writer's opinion, house organs, of the right sort, are extremely effective and this view is substantiated by the doctors' questionnaire.

Booklets and Post Cards

Booklets and post cards stood sixth and seventh respectively, in the number of votes cast. Two hundred and ninety-four doctors voted "yes" for booklets, 124 "no." Post cards, 123 "yes"—270 "no." Here is where a great deal of money can be saved. Millions of dollars are wasted annually in elaborate and expensive booklets, which go to fill overworked and overflowing waste-baskets. Practically every one of the 294 doctors who voted for booklets, when asked what size is most popular, stated they preferred small, brief, concise, pocket size, short, compact, leaflet size, 3¼x6, 4x6, or some other such convenient size.

It is very plain that the doctor is flooded with advetising and promotional matter. He receives from ten to twenty communications a day all enclosing literature. Even if he is interested, he hasn't the time peruse, much less study this mass of printed matter, which comes to him unsolicited. We must get the facts over to him quickly and clearly, in such attractive form as to arrest and hold his attention, if for but the brief space of two or three minutes. Even when the doctor requests literature on some

subject in which he is particularly interested, he wants to know the facts and is not greatly concerned with elaborate introductions and superfluous paragraphs. He wants accurate descriptions, clinical data, authoritative references and intelligent conclusions, or summaries, in as concise form as possible. I believe that fully 50 per cent of the money now spent in elaborate booklets might be saved.

One firm in this association has saved from twenty to thirty thousand dollars a year by standardizing its literature. In place of extensive and expensive booklets, four and occasionally six page leaflets, measuring 3½x6½ inches, are used almost exclusively. In place of enclosing a sixteen page booklet with every package of a certain specialty with a large sale to physicians, a four page leaflet is now used to give directions. Obviously this literature will go to the same doctor as many times as he reorders the product, so why not reduce the expense of package enclosures.

This same firm is now planning to standardize not only the size and typographical appearance of its literature, but will also attempt to standardize the literary style and arrangement in conformity to the ideas of the doctors. So much for booklets.

Post cards, as a means of promotion to doctors, seem to be decidedly unpopular except as return cards for samples, orders, etc. Possibly this objection is based partly upon the fact that the physicians do not care to have their mail scrutinized by the public and also because of their distast for one cent mail.

Letters

In this connection, 317 doctors voted for letters and 127 against letters. It is interesting to note that 302 of the 317 votes in the affirmative, specified that 2-cent stamps should be used and 168 doctors favored th filling-in of letters to make them as personal in appearance as possible. Many doctors called attention to the value of the brief, concise and practical letter as opposed to the verbose and rambling epistles sometimes used. Most of them say, "One cent mail goes into the waste-basket unopened."

Short letters with samples and, above all, personal letters appear most popular. With our present day method of duplicating by typewritten processes and filling in, it is possible with a little more care and a trifle more expense, to make our letters personal in their appearance. This has proven popular in many instances. A poorly written and slovenly produced form letter is worse than none at all.

Distribution of Doctors

It is of value to know that 18,792 young men are now studying medicine and will become doctors in the next four years, less a few who will drop out of college in the meantime. This number is in excess of 14,544 who have graduated in the past five years. Seven thousand one hundred and seventeen deaths have been reported in the medical profession in 1921

1922 and up to November in 1923. So it is evident that the number of doctors will not decrease for the next four years at least.

More attention should be paid to the distribution of doctors than to the much-talked of shortage. Changes in the location of doctors have been brought about by better roads and more automobiles, more community hospitals, more group clinics, as well as the expense of a medical education which is leading young graduates to take up specialties in the cities, rather than general practice in the country.

It is important to know that 28 per cent of the entire medical profession is now concentrated in 26 cities of over 250,000 population. Fifty-one thousand, six hundred and twenty-four doctors, or 35 per cent of the entire profession are located in towns of 50,000 and over. Fifty-one thousand, three hundred and sixty-three doctors, or about 35 per cent, are located in 21,670 towns of less than 5,000 population.

Selective Promotion

Another interesting fact developed in this questionnaire was the suggestion by several doctors that more of our promotion be done selectively—in other words, an eye, ear, nose and throat specialist stated that general samples and literature are wasted on him. He is not interested in baby foods, and other subjects on which he is constantly solicited by mail.

By means of our medical directories we can classify our lists of doctors interested in Ophthalmology, Surgery, Dermatology, Urology, etc. Special letters and literature directed to these classes are far more effective than general promotion. Here is an opportunity for us to save money. There are 143 societies devoted to the specialties in this country and 14,517 doctor members of these societies. Lists are easily available.

Another place for us to save money, is to keep our mailing lists and directories up-to-date, and to trim them down so as to eliminate the deceased, the inactive, and the doctors of 65 or 70 years and older who are probably not doing much practice. The average age of the doctor is 45 years; 14 per cent are over 60 years old.

These and similar facts are of importance in our promotion as well as sales work. Speaking of sales work, the vote of doctors on detail men is very instructive.

Detail Men

Six hundred and thirty-one doctors out of a total of 741, stated that they interviewed detail men. One hundred and ten did not, but of the c many were in small towns and frequently covered by pharmaceutical salesmen. Five hundred and thirty-one doctors were of the opinion that the work of the detail men was effective and 139 voted "no" on this question. Seventy-seven doctors were of the opinion that the use of detail men was the best method of pharmaceutical promotion. In fact, more doctors mentioned this specifically than any other method except sampling.

The comments on the work of the detail men are interesting and illuminating.

Scores of doctors added, in the space left for remarks, that the detail man should be well educated in his line—that he should be well informed —that his work is only effective when he knows what he is talking about. They say that many detail men have little or no exact knowledge of his drugs such as the physician wants.

Quite a few doctors believe that a detail man should be a graduate of medicine or pharmacy, or have a knowledge of chemistry, so as to be able to answer questions on the pharmacology and physiological action of n e inal preparations.

Several doctors remarked that the detail man should not attempt to teach therapeutics but confine his remarks to the pharmaceutical merits of the preparations he is detailing.

Busy practitioners appreciate the detail man who does not waste time, but talks directly to the point, is diplomatic in not being too insistent and who knows exactly what he is talking about.

The fact seems to be that there is room for improvement in the selection, training and education of our detail men—also that when prop used, this is the most effective form of pharmaceutical promotion—the direct contact.

Sampling in connection with detail men has already been referred to as a method popular with most doctors.

Along this line, it has been my contention for some time, that the expense of detail men, when they take any orders at all, whether sent direct to the house or turned over to the dealers or druggist, should properly be charged to the sales department, providing separate budgets have been outlined and appropriations made.

On this point there is some variance of opinion among the manufacturers who answered our questionnaire. Seven firms state their detail men are charged to the promotion account, and five say to the general sales account.

Advertising Budgets

In this connection, only 60 per cent of the members interviewed, have appropriated definite sums for advertising or have advertising budgets. Eighty per cent of the firms having advertising budgets, charge only sal ries and the expense of the advertising department to overhead promotio no other indirect charges entering into the advertising account.

All firms returning questionnaires, stated that their salesmen are full informed of advertising plans, either in advance, or as such advertising is being done.

Added efficiency to both sales and advertising is brought about by clo cooperation and harmony between these two departments. It is essential to the largest success of sales and promotion work.

Educational Advertising

One of the most interesting aspects of this survey, to me, was the reaction of the profession to the questions on the advisability and probable effectiveness of an educational, advertising campaign to the laity. To my surprise, 615 doctors voted "yes" and to the necessity for such a campaign, 110 doctors "no"; 570 doctors stated that in their opinion, such a campaign would be effective and 114 "no."

Many interesting remarks were made on this subject. It was commented upon from many angles—as one doctor says, "The mystery of medicine must be done away with and the public educated to understand just what can be done and the reason." The doctors feel that the people do not know what the medical men are doing, and I believe this is true. Another says, "The accomplishments of the well-trained physicians are tremendous, and the public must be educated to the facts. Their education has been largely the propaganda of the cults."

I shall not comment further on this proposed plan as it concerns only indirectly the subject of my paper, but I want to voice my opinion now, that some day, and not in the far distant future, we shall be forced to the serious consideration of this subject, in connection with the medical societies, allied associations and all available and legitimate avenues of promotion. I repeat again, what the world is looking for is facts.

Pharmaceutical and sales promotion is becoming a more difficult and complex problem each year. It is worthy of our serious study and earnest effort. In fact, to go forward, we must give the matter more thought and continually be digging up new facts.

If I have inspired only a few to a closer study of advertising facts, my investigation will have been justified.

AMERICAN PROCTOLOGIC SOCIETY

(Abstract of Papers Read at Annual Meeting, June 23-24, 1924)

"QUO VADIS," PROCTOLOGIST

Presidential Address

Ralph W. Jackson, M.D., F.A.C.S., Fall River, Mass.

The writer said that the twenty-fifth anniversary of the Society was an appropriate time to consider its future and that of proctology. The development of any specialty was due to the need of better work in that particular line and this had been specially true of proctology. As there is need of general practitioners in rural communities, so there is need of proctologists in other than the largest cities. New England was cited as an example of such need. The need is general and offers a profitable field for specialization. The American Proctologic Society and the Section on Gastro-enterology and Proctology of the A.M.A. should take the lead in encouraging such specialization. Recommendations of past presidents of the former along this line have not lead to adequate action. Too few of the Fellows have carried the burden of the work. The Secretary has the greatest opportunity for advancing proctology, but must have cooperation. The papers collected in the Transactions are more likely to be consulted than when sporadically published in the journals. The transactions are widely distributed and in demand by young proctologists, and offer the most permanent publicity. A special journal in proctology would do much to advance the specialty, but is impracticable at present. Some method of keeping all proctologists posted on current events is desirable. Not all Fellows can write books, but all have something to contribute to proctologic knowledge, and can best do it through the Transactions. Elementary proctologic teaching in schools is far below par, and the graduates correspondingly ignorant. Too many good proctologists are not affiliated with the Society, but should be for their own good and that of the specialty. A list of such men should be compiled, and the Associate Fellowship should be the means of accomplishing the desired affiliation. Finally the writer said that, though the Society had accomplished much for proctology in the past twenty-five years, only an intensive campaign by the Society, by every Fellow, and by every one who ought to be a Fellow, would give the specialty the future it deserves.

PROTOZOAL INFECTION AND THE RELATIONSHIP TO DYSENTERY

By G. Milton Linthicum, A.M., M.D., F.A.C.S., Baltimore, Md.

A historical synopsis is used not alone for its interest, but to associate it with the present recognized classification of Ciliata, Flagellata, Amoeba and Coccidia. The life history of the various groups, calls attention to

the cycle completed within the host; the feeble vitality of the organism outside, as contrasted with the virility within the tract; the manner of dissemination by the cysts alone, and the danger of unbroken sanitary provisions. Danger of epidemics of infection is slight, while increased number of cases are to be expected, as travel in the tropics increase. The possibility of protozoal infection is suggested in chronic or intermittent diarrhoeas. Parasitism is a term not applicable to all the protozoa as it suggests baneful influences while only the Amoeba histolytica and Balantidium Coli, have been incontrovertibly proven guilty.

Further pathological studies are needed, also a study of the relationship of absorption from intestinal lesions, and the depression associated with these infections is suggested.

POSTURAL DEFECTS AFFECTING THE RECTUM

C. C. Mechling, M.D., Pittsburgh, Pa.

A variety of pains referred to the ano-rectal region but of obscure origin, are believed to be due to a faulty sitting posture. These pains are referred through the sacral plexus. Orthopedists recognize four points in the spine usually strained and of these the lumbosacral region is the part most exposed to pain.

Strain results from weight and pressure applied to the cocyx and sacrum from unnatural directions. The skin over the cocyx and sacrum show keratoses, while the usual keratotic areas over the tuberosities of the ischia are absent. The diagnosis is made from the history of vague pains, the characteristic skin changes, and absence of lesions in the bowel.

PRECANCEROUS CONDITIONS ABOUT THE RECTUM

Arthur A. Landsman, M.D., New York

The writer mentions the large mortality from carcinoma in general, and cites statistical data to prove that the disease is steadily on the increase. After quoting authorities to prove that there are wide differences of opinion about the causes which are held responsible for the origin of carcinoma, he goes on to state that there is an agreement on two points: (a) that in a certain proportion of cases cancer is preceded by long continued irritation, (b) there is in most instances an abnormal state of the tissues at the site where malignancy develops, such as erosions, ulceration, hypertrophies, cicatrices, benign growths, etc. He refers to some personal cases in which apparently innocent anorectal lesions were transformed into malignant tumors and submits similar examples from literature. The author groups the pathological conditions about the ano rectal region which are liable to malignant degeneration as follows:

1. Any indolent sore, erosion, crack, fissure, ulcer, wound or break

in the tissue, which in the absence of unfavorable constitutional conditions, fails to heal. Especially when this is located at the recto sigmoid, muco cutaneous junction, at the base of one of the valves, at the point of attachment of supposedly innocent growths, about folds or situations where there is an abrupt change of structure or locations where it is exposed to repeated bruising.

2. Benign neoplasms which are soft, highly pigmented multiply in great numbers, grow rapidly, extend steadily, have a tendency to grow on a broad base rather than on an elongated pedicle and recur after removal.

3. Any long standing irritative disease or process about the rectum, such as fistula, stricture, prolapsed rectum, diverticulitis, the skin changes which follow chronic anal pruritus, peri-anal dermatitis, eczema, leukoplakia, may in time result in malignant degeneration.

4. Inflammatory lesions due to tuberculosis or syphilis may have carcinoma engrafted upon them.

5. Malformations and congenital tumors occasionally acquire a malignant character.

Concluding, he advises that since it is impossible to foretell when any of the above may undergo malignant transformation that ALL of them be promptly corrected or removed whenever this can be done, as a truly preventive treatment of carcinoma.

PLEA FOR THE SUBSTITUTION OF PERINEAL AND VAGINAL EXTIRPATION FOR "KRASKE'S" AND THE "COMBINED OPERATION WITH PERMANENT COLOSTOMY" IN THE TREATMENT OF ANO-RECTAL CANCER

S. G. Grant, M.D., New York

Kraske's sacral excision deserves a place in the discard because it is difficult, requires considerable time, is bloody, destroys pelvic support and convalescence is prolonged because of the length and nature of the wound, a sacral anus is left, the patient is unable to defecate in the normal position, a sensitive scar or tender end of the bone troubles the patient afterwards and the anus is prone to contract and require subsequent dilatation.

This procedure has no advantages over vaginal or perineal excisions which can be performed in a few moments, mortality of which is materially less than from sacral extirpation, is seldom accompanied or followed by complications or sequela and confines the patient in the hospital for a short time.

The writer contends that the combined operation ought to be abandoned because of the high mortality, it is difficult and prolonged, leaves the patient with a disgusting permanent artificial anus and is unnecessary because high growths can be extirpated by resection and cancers involving

the lower sigmoid and rectum are quickly exercised by the perineal and vaginal routes the mortality from which is four times less, convalescence is much quicker and complications and sequela are seldom observed.

The writer has had little difficulty in mobilizing the bowel sufficiently to remove the growth and suture it to the anus and has only once observed recurrence in or about the pelvic colon, which indicates that the removal of high glands and adjacent gut are less important than supposed and that the extirpation of lymph nodes located in the per-rectal fat is usually sufficient. Hence perineal and vaginal excision should be substituted for the unwarranted serious abdomino-rectal procedure with colostomy in cancers involving the rectum and recto-sigmoidal juncture.

SACRAL ANESTHESIA IN PROCTOLOGY

Louis E. Moon, M.D., Omaha, Nebr.

A brief review of sacral anesthesia with technique, its indications and contra-indications, and a resume of 400 cases.

"OBSERVATIONS RELATIVE TO THE SPASTIC COLON"

Edward B. Kaple, M.D., Syracuse, N. Y.

The writer does not attempt to present any new or original contributions on the subject of enterospasm, but feels that too little consideration has been given the subject in the text books on diseases of the anus, rectum and colon.

A study of the records of those cases of constipation who have consulted the writer, excluding those of an obstructive type due to malignant or benign growths, adhesions, or anatomical abnormalities, shows the spastic type to constitute over 30 per cent where it has been possible to include an X-ray study in making the diagnosis; if those cases which he believes to have been spastic, but was unable to definitely prove them so, are included, the percentage is even higher. If these figures are an approximate estimate of the comparative frequency of spastic constipation, then its importance becomes obvious.

The writer quotes from many text books to show a recorded view that this type of constipation is comparatively rare; that when present it is most often secondary to some diseases of the nervous system, faulty position of the kidney or colon, some toxic or chemical irritant, or to some gastric or intestinal disease. He states as his experience and his convictions, that it is not at all uncommon, and while admitting all the above causes to be at times present and active, yet the most frequently prevailing etiological factor he believes to be some irritation focus in the rectum.

The writer contends that if there be any truth in the idea of irritation resulting from gastric, intestinal, or gall bladder pathology, or even

from a displaced kidney, producing a reflex spasm of the colon, that it is equally logical to assume that the irritation from lower rectal pathology may pass through the above mentioned nerve paths to the plexuses of Aurbach in the colon.

In view of the writer's belief that rectal irritation is the most frequent etiological factor, the necessity for a complete and painstaking rectal and sigmoid examination in every case of bowel dysfunction (persistent) becomes evident. The writer states that he has been unable to note any particular anal, rectal or sigmoidal pathology that of itself justifies a diagnosis of enterospasm, and that the value of such examinations is in the finding of areas of irritative pathology. Such pathology need not be serious nor extensive, but any condition provocative of local irritation, plus individual herpersenstaiveness, may be sufficient. Special mention is made of irritable crypts.

Regarding treatment, the writer considers only those cases in which the etiology is within the colon or rectum, assuming the correction or exclusion of gastric, gall bladder, or intestinal factors. Habits, diet, medication, and relief of local pathology are all rather fully discussed. The writer's aim in treatment, briefly stated, is to produce a minimum of spasticity through regulation of diet, along lines fully discussed; to maintain a constantly soft, unirritating stool without stimulation of secretory or motor function; to control the persisting spasticity by medication while the search for and removal of the focus of irritation is going on. Case reports.

THE CHARLATAN PROCTOLOGIST

Jack Halton, M.D., Sarasota, Fla.

Probably no branch of pathology suffers more from the charlatan and the quack than that pertaining to rectal diseases. Indeed a large part of the rectal cases that come to the specialist who has devoted his time for years to a study of this branch of human suffering and its alleviation have first been treated by the druggist and patent medicine vendor, then by the general practitioner or a fake advertising specialist. The charlatan in medicine is an impudent pretender to the healing powers he does not possess. The quack is an ignorant charlatan.

Both terms are often wrongfully applied to irregular practitioners, the thousand and one graduates of Class A colleges legally registered in their different states; the advertising M.D.'s; the mail order M.D.'s and last but not least by any means the advertising rectal specialist or proctologist.

Why is the charlatan proctologist, and who is to blame for his success? What are his methods of treatment and of procuring patients? Naturally the non-operative treatment of hemorrhoids is the most prolific field for the proctologic quack.

The bare mention of "operation" or "knife" is abhorrent to many

people. By nature of things the patient is not keyed up by the more or less public exploitation of his or her pain and suffering. It is one of the ailments which Victorian conventions compel us to carry in smiling silence. Promises of painless cures, bloodless cures and cures without detention from business sound good to the prospective patient who will accept the advice of a charlatan and place himself under his care rather than undergo the slight operation the case may demand.

This is not a plea for the injection method of hemorrhoids, though wonderful results accrue therefrom.

Of course there are tricks in all professions as well as all trades and the hard working, ethical physician and surgeon knows little of the tricky methods that have made wealth for hundreds of so-called rectal charlatans, men who are using secret formulas and selling the same along with their special technique and instruments.

It is the aim of the charlatan and quack to create in their patients a feeling of awe—to impress them with the idea that the operator is possessed with pschycic power and almost supernatural knowledge. It is to the credulity of the people in general and his own blatant effrontery that the charlatan is a success in the matter of money getting. The public is always on the lookout for something out of the ordinary, something hidden and mysterious and the more nearly it approaches the magic and the occult the harder they fall. And this goes with a certain class of newspapers as well. There is no news in the fact that the physician effects cures by the dozens and scores 365 days in the year. That is what he is employed for and the public never hears of it. But let it be reported that a lame girl has thrown away her crutches or a blind child been given sight by the laying on of hands of some itinerent quack, it would be spread before ten thousand readers without investigation, and believed without investigation.

"VACCINES IN THE TREATMENT OF PRURITUS ANI"

J. F. Montague, M. D., New York

Bacterial infection of the skin in a pruritic area is liable to occur in all cases. That it does not occur in 100 per cent of the cases is due either to efficacy of the local barriers, to invasion, i. e., the resistance of normal skin and mucosa to invasion, or to the efficacy of the immune powers of the body cells and plasma fluid to resist such invasion. When pruritus continues for any length of time the local barrier to infection is weakened or broken by the scratching and rubbing incidental to efforts at relief from the itching. This may be observed clinically in the form of excoriations or erosions. With such breaks in the skin bacterial invasion is rendered easy. The only factor which can prevent infection then is the immune powers of the cells and plasma fluid. When this is normal, invasion is successfully resisted. When it is not up to normal invasion is certain to occur. Hence

the author urges the use of suitable vaccines in all cases of pruritus showing excoriations or abrasions. The object of such vaccines is to increase immune bodies to such an extent as to successfully resist and destroy invading bacteria. In such a situation the use of vaccines is an auxiliary curative measure. But to go one step further in the intelligent use of vaccines—they may be used as prophylactic against invasion in every case of pruritus for the reason that then should excoriations or erosions occur the immune bodies will be preponderant from the start and invasion will be rendered less likely. The author uses successfully a vaccine of those organisms which his bacteriological researches have proven the causative agents in such invasion, namely the Staphylococcus albus and B. Coli.

THE INJECTION TREATMENT OF HEMORRHOIDS

A. H. Earley, M. D., Denver, Colo.

A microscopic study of hemorrhoids including a series of cases showing the successive changes occurring twenty-four hours up to twenty-one days after injection. A brief synopsis of the result of over forty thousand injections.

TRUE DERMOID CYST OF THE ANTERIOR WALL OF THE RECTUM

J. F. Saphir, M. D., New York, N. Y.

The writer reported the following case.—A woman of 38, married 17 years, when delivered of her sixth child with the aid of low forceps, expelled by rectum a large hair ball matted together with a caseous substance. She denied having swallowed any hair, and the color of her own hair was very dark, while the hair ball was distinctly blond. Four days after delivery the writer was called to determine the cause of the patient's severe gas pains which could not be relieved, and when attempts at giving "high colon irrigations" were made she passed much free blood.

Examination revealed a large ulcerated cavity about two and a half inches above the anal opening on the anterior wall of the rectum, and extending for about two inches upward to the base of one of the rectal folds, at about the recto-sigmoidal junction. This cavity extended for about one and one-half inches transversely, involving about one half of the circumference of the bowel, and was filled with clotted blood and granulations, and there was also oozing of fresh blood. The upper lip of the ruptured cyst was oedematous and was interfering with the passage of gas or feces, and insertion of the irrigating tube caused bleeding by breaking off some of the granulating tissue.

A diagnosis of ruptured dermoid cyst of the anterior wall of the rectum was made. A gynecologic examination revealed the presence of normal

tubes, ovaries and adnexa, and no connection between the pelvic organs and this dermoid cyst.

The case was presented on account of it being very rare.

AN OPERATION FOR THIRD DEGREE PROLAPSE OF THE RECTUM AND SIGMOID

Louis J. Hirschman, M. D., F. A. C. S., Detroit, Mich.

After briefly discussing the etiology of intussusception or third degree prolapse of the rectum and pelvic colon, a method used since 1908 for the restoration of the mesentery of the pelvic colon to its normal size and position is described.

The abdomen is opened under the anesthetic of choice, and by obliterating the intra-sigmoidal fossa by parellel rows of cat gut suture, the prolapsed bowel is drawn out of its abnormal position, and the obliteration of the intra-sigmoidal fossa creates a mesenteric attachment in the normal position.

When the operation is completed the bowel is held in position by its normal attachment, the mesentery. It is not attached to any immovable surface, nor is any resection or deforming operation performed.

JACK-KNIFE POSITION AFTER HERNIA OPERATIONS

The posture of the patient after an operation for hernia is usually neglected. If surgeons realized that they could reduce their recurrences materially, besides adding to the comfort of their patients, the jack-knife position would become a matter of routine for inguinal, femoral, umbilical and ventral hernias which presented difficulties in closing the fascial layers.

In inguinal hernia operations the best exposure is obtained by keeping the thigh extended until the deep sutures are ready to be tied, when it should be elevated, adducted and rotated inward. This reduces the distance between Poupart's ligament, the internal oblique and conjoined tendon from 25 to 50 per cent, depending on the size of the opening, the variety of hernia, and the development of the muscles. After the patient is returned to bed his knees and shoulders should be elevated 25 to 45 degrees by means of pillows and a back rest. This position takes the strain off of the stitches during the process of repair, permits a broad firm union of fascial flaps, and reduces the percentage of recurrences. The jack-knife posture should be maintained as long as the patient stays in bed.—Leigh F. Watson, *Annals of Surgery,* August, 1924, lxxx, p. 239-241.

PARAFFINOMA OF THE VAS DEFERENS

The author reports an unusual complication following the paraffin injection of an inguinal hernia by a charlatan. The hernia promptly recurred and the cord and testicle on the side treated became swollen, painful and tender on pressure. At operation paraffin masses were removed from the internal oblique muscle, the conjoined tendon, and the vas deferens. The vas was occluded and it was necessary to resect it anastamose the ends.

Because of the high percentage of recurrence following operations for "paraffin hernia" the regular Bassini operation was combined with the author's method of *lateral displacement of the cord.* With the cord displaced on to the internal oblique, ½ inch to the inner side of the deep suture line, the overlapped fascial flaps were securely stitched to the deep suture line to reenforce the weak spots, the usual points of recurrence—the internal ring, the lower end of the incision over the pubic bone, and the line of deep sutures.

The serious accidents that sometimes follow paraffin injections of hernia are: Gangrene of the skin; injection of cord structures; wounding of intestine, appendix, or bladder with the needle; injection into blood vessels, followed by pulmonary or cerebral embolism or sudden blindness from plugging of the artery of the retina, and occlusion of the iliac or femoral artery, with gangrene of the extremity necessitating amputation.—Leigh F. Watson: *Journal of the American Medical Association.* 1924, lxxxii, June 14, p. 1935-1936.

GASTROINTESTINAL SYMPTOMS AND EPIGASTRIC HERNIA

Hernia in the linea alba has often been confused with gastric and duodenal ulcer, and sometimes the two conditions exist at the same time. The presence of a tumor or slitlike opening in the linea alba, with or without the protrusion of a small mass on coughing, will help to establish a diagnosis of hernia.

In ulcer the symptoms come on at a certain interval after eating, while in hernia the paroxysmal attacks have no relation to meals but usually follow physical exertion, and the patient finds the most relief is secured by assuming a doubled up position, which relaxes the linea alba—when the omentum slips back into the abdominal cavity the pain disappears. Epigastric hernia must also be distinguished from cholelithiasis, cholecystitis, gastralgia, gastritis, carcinoma, sarcoma, appendicitis, nephrolithiasis, abscess or tumor of the abdominal wall, and the gastric crises of tabes.—Leigh F. Watson: *New York Medical Journal and Record,* April 16, 1924.

HERNIAL TUBERCULOSIS

The diagnosis of hernial tuberculosis is seldom made except at operation unless lesions exist elsewhere, such as in the abdominal viscera, peritoneum, genital organs, spine, bones, joints, lungs, or meninges. The outlook is ordinarily grave because the patient often dies from the primary lesion. In children a congenital tuberculous hydrocele is often mistaken for a simple hydrocele. If the tuberculous hernial contents are thoroughly exposed to the air, improvement generally follows and sometimes healing of the local condition. Peritoneal tuberculosis is nearly always present also and should be dealt with through a second incision. In addition to the operative treatment, the usual measures employed to combat tuberculosis are necessary.—Leigh F. Watson: *International Clinics,* 1923, vol. 1, s. 33, p. 230-235.

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SANE AND INSANE AS CLASSIFIED BY SOCIETY

If a man imagines he is Napoleon and walks the streets with his arms folded and the mien of an emperor, society says to him: "Man, you are insane, you will have to be placed behind bars. Napoleon died many years ago. You cannot be he." The lunatic replies: "Yes, you are the enemy. It is necessary for me to go into confinement so that later I, Napoleon, can come out and free my people." Society laughs and puts him in an asylum.

Millions of people walk the streets today, each one thinking he is "all important," each one believing his life more precious, his thoughts more valuable, his conduct of greater significance than that of anyone else, each one imbued with the idea that he is complete in himself and that all other members of the human race are different from him and are therefore to be used by him for his advantage, each one indulging illusions and haunted by superstition. Society says nothing to them because they *are* society. They are sane because they are the multitude.

It seems, however, that to a perfectly sane group of people, a group that realized the impossibility of the basis of separativeness, these people would be just as insane as the Napoleonic character. Although free in the objective sense they would be just as definitely imprisoned as in an asylum. For they are surrounded by fear, and weighted down by superstition. What they want to think they believe, and whether it be true or not it becomes an actuality to them.

It seems that until a group exists, which will live and function as one organism, it is impossible for society to realize the insanity of its basis. One cannot say a certain apple is very small unless one has seen a larger apple. Neither can society see its insanity until it sees people living a larger, saner and more inclusive life.—*Mental Health.*

In concluding this summary, it is stated:

"While the actual percentage reduction has slowed up, it is evident that improvement in the typhoid situation in many cities is still taking place. We believe that the end is not yet reached, and that a still further diminution in typhoid in American cities will be noted within the next few years. It is not likely, however, that the decline will be as rapid or as marked as it has been in the past decade, and it seems probable that a reduction much below the point now reached will come about only when a curb is put on rural typhoid throughout the country. Eradication of rural typhoid is a difficult but by no means impossible task, and it is encouraging that many health officers throughout the country have set their hands to this undertaking. The cities, as well as the country, will profit by every successful attempt to do away with typhoid in country districts."

[1] For 65 cities.

CARBON MONOXIDE

Investigation of a certain chemical compound, the spraying of which in garages was claimed to reduce the danger of carbon monoxide poisoning from exhaust automobile gases, made by Department of the Interior chemists at the experiment station of the Bureau of Mines in Pittsburgh, fails to substantiate the claims of the manufacturers.

In its investigations relative to reducing the hazards of carbon monoxide poisoning, the Bureau of Mines recently had its attention drawn to this compound which is sold under a trade name. The advertising matter issued by the manufacturers claims that the compound "holds chlorine and oxygen gases in solution with formaldehyde, which unites with the hydrogen to form hydrochloric acid, giving an over-supply of oxygen which burns up carbon just as a piece of wood is burned in the fire. The formaldehyde in the composition of the compound is a great affinity for ammonia and hydrogen sulphide gases."

Instructions were given to "spray the compound regularly about the work rooms, wash rooms, lockers, toilets or where danger from carbon gases exists and watch the results." It was claimed that use of the compound would bring about increased activity among employees, prevent headaches, and promote greater efficiency and general improvement in many ways. The compound was "guaranteed under the United States Federal laws."

In order to test the merits of the compound, some of the product was obtained by the Bureau of Mines and analyzed for its power to absorb, oxidize or destroy carbon monoxide. No indication was found, however, of a decrease in the carbon monoxide content or a perceptible increase in the amount of oxygen through the agency of the compound solution. In the apparatus used the volume of compound per unit-volume of carbon monoxide was far in excess of that which would be practical, according to the directions given, to obtain through the use of the compound in a garage. The contact between the solution and the carbon monoxide was much more intimate, and the concentration of the compound vapors was more concentrated than would prevail in ordinary use.

The compound does not absorb carbon monoxide from garage atmosphere, consequently the spraying of this solution around garages does not decrease the hazard or danger of poisoning from the inhalation of exhaust gases from automobiles.

Details of these tests are given in Serial 2594, by A. C. Fieldner and W. P. Yant, copies of which may be obtained from the Department of the Interior, Bureau of Mines, Washington, D. C.

Carbon monoxide, most common and insidious of poison gases, is continuing its frightful ravages on human life, according to a statement made by Dr. R. R. Sayers, Chief Surgean, Bureau of Mines, Department of the Interior, before a meeting of the Pacific Safety Conference at San Francisco. In New York City several hundred deaths occur each year from carbon monoxide poisoning, due chiefly to domestic use of gas where sufficient care as to proper use of appliances and ventilation is not taken. Records from the State Department of Health of Ohio, which are said to be incomplete, show that 64 deaths and 113 partial asphyxiations occurred in that state during the winter of 1922-23. Fifty-five of the deaths were due to gas heaters and stoves and five to exposure to automobile exhaust gas.

Carbon monoxide is a gas slightly lighter than air, with which it diffuses readily. It will burn and has a wide explosive range. Like air, it has neither color nor taste and has no odor in concentrations usually encountered, therefore it cannot be detected by the ordinary senses with which men are endowed. It is produced by burning carbon-containing fuels, as coal, wood, gasoline, natural and manufactured gas, etc., whenever not enough air or oxygen is supplied to burn the fuel completely.

The human race has probably been exposed to this gas since men first began using fires in confined or sheltered places. A number of cases described in the ancient literature indicate that carbon monoxide was a frequent cause of death by accident, suicide, and as a means of punishment or torture. Aristotle, who lived in 384-322 B. C., stated that "animals collapse from harmful odors, as man gets a severe headache and often dies through charcoal vapors." The Romans knew that smoke was poisonous, and used the greenest, most smoke-producing wood to put persons to death. The occurrence of carbon monoxide poisoning has increased in frequency through the years until at the present time it is found in the home as well as in many industries.

Common sources of carbon monoxide, illustrating its universal occurrence, are mine fires and explosions; the gaseous products of combustion of powder, dynamite and other explosives; blast-furnace stack gas; coke-oven gas; coal gas; producer gas; gas ranges and room heaters burning natural gas or manufactured gas; automobile exhaust gas; smoke from burning buildings; and railroad locomotive stack gas. Manufactured gas may contain anywhere from 10 to 30 per cent of carbon monoxide. If the connections with either heaters or lights are poorly made an added danger is introduced. The use of rubber tubing has been especially emphasized by many investigators as causing poisoning and often death of those exposed, due to deterioration of the rubber and to ill-fitting connections. Automobile exhaust gas contains an average of 7 per cent of carbon monoxide.

The detection of carbon monoxide is very important in order to avoid

exposure. In concentrations usually found carbon monoxide cannot be detected by its odor. However, in its occurrence from most sources carbon monoxide is associated with other gases having distinctive odors, and thus warning is given of a dangerous atmosphere. Removal of the odorous constituents from illuminating gas in scrubbing the gas is often the cause of poisoning to users through absence of warning odor. The odors coming from domestic gas stoves may or may not be a criterion for judging the presence of carbon monoxide.

Mice and birds are more quickly affected than men by carbon monoxide, and may be used for detecting dangerous atmospheres. Birds are preferable because they show symptoms earlier and are easier to observe.

The miners' flame safety lamp cannot be safely used for the detection of carbon monoxide in air, as it is difficult to detect with a safety lamp even the presence of 1.5 per cent of carbon monoxide. This percentage is exceedingly dangerous to life—in fact, a man breathing such an atmosphere would be overcome almost at once.

The "Hoolamite," or activated iodine pentoxide indicator for carbon monoxide, is frequently used by engineers of the Bureau of Mines engaged in mine-rescue and recovery operations. The indicator gives immediate positive results with carbon monoxide in air in concentrations of 0.07 per cent or more. This detector has an advantage over the use of mice and birds in that a determination can be made in less than one minute, whereas it takes as long as 30 minutes before an animal will give an indication of gassing in, say, a concentration of about 0.1 per cent of carbon monoxide. No skill is required in making a determination.

A qualitative detection of carbon monoxide in air in amounts greater than 0.03 to 0.04 per cent can be made by shaking a dilute solution of blood with the air, and then comparing it to an unexposed sample of similarly diluted blood. If carbon monoxide is present the exposed samples will be pinker than normal blood.

The Bureau of Mines has recently devised a method whereby the blood solution, which is brought into equilibrium with the gas by shaking as described above, is quantitavely analyzed for carbon monoxide hemoglobin, and the amount of carbon monoxide in the air determined in low concentrations to an accuracy of 0.01 per cent. Also, the same apparatus can be used for the determination of carbon monoxide in the blood of a supposedly poisoned victim. The apparatus is simple, portable, and compact, and the making of determinations requires no special skill. Carbon monoxide exerts its extremely dangerous action on the body by displacing oxygen from its combination with hemoglobin (red blood).

It has been shown many times that animals without red blood can live in atmospheres containing high concentrations of carbon monoxide without apparent harmful effects. Recently this was demonstrated at the Pittsburgh experiment station of the Bureau of Mines, when some roaches were

kept for several days in an atmosphere of over 60 per cent carbon monoxide, 20 per cent oxygen and 20 per cent nitrogen without lessening their activities.

The after-effects of carbon monoxide poisoning range from practically none to headaches, muscular pains, long periods of unconsciousness, loss of strength, and mental derangement, such as loss of memory, paralysis and temporary blindness. In nearly all cases these after-effects clear up within a few days, but there are cases where they have extended over several months.

Good ventilation and good equipment are the most important factors in the prevention of carbon monoxide poisoning. For treatment inhalation for a period of 20 to 30 minutes of oxygen or a 5 per cent mixture of carbon dioxide in oxygen, if available, will greatly decrease the number and severity of symptoms of carbon monoxide poisoning, as well as decrease the possibility of serious after-effects. All hospitals, and all industries in which this type of poisoning exists, should supply apparatus for the efficient administration of these treatments. Everyone should be trained in methods of giving artificial respiration and as many as possible know how to use inhalers in order that resuscitation of carbon monoxide victims may be effected promptly.

Copies of Serial 2593, containing information regarding carbon monoxide poisoning in homes and industries, and outlining methods of treatment of acute carbon monoxide poisoning, may be obtained from the Department of the Interior, Bureau of Mines, Washington, D. C.

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25 TO 1

In view of numerous editorials written in the past about Justice in the United States (merchandise like pork and wheat) with our daily murders and no punishment, we are glad to quote an editorial from the *Chicago Tribune* under the above caption:

> The commissioner of police of the London metropolitan district reports that in 1923 there were twenty-seven cases of alleged murder of persons above 1 year of age in his jurisdiction.
>
> The Chicago crime commission reports that in the same year there were 270 murders, according to the findings of coroners' juries in Cook county.
>
> The absolute ratio is therefore ten murders in Cook county to one in the metropolitan district of London.
>
> But the ratio per capita is even worse from our viewpoint. The metropolitan district of London has a population of 7,500,000 in round numbers. Cook county has a population of 3,000,000 in round numbers. The ratio of murder according to population is, therefore, not 10 to 1 against us, but about 25 to 1.

In 1923 coroners' juries returned 270 murder verdicts. Grand juries returned indictments in 129 cases. Nine persons were sentenced to be hanged and one was executed.

The police department has all the faults of the American police system and some of its own but the other branches of criminal justice begin to break down as soon as the police have presented the cases. If they held up their end as well as the police do law might begin to be a terror to the evildoer.

Not all the persons charged by the police are guilty but the majority of them are. The breakdown is not in the detection of murder and the arrest of the murderer but it is in what happens subsequently. Frequently the police risk their lives to catch men whose guns are still hot. Sometimes they lose their lives doing this but a murder a day and a hanging a year is about the normal record of this county.

PEACE AT THE LAST

THE RETROSPECT OF LIFE

We are much pleased to reprint the following splendid article from the LONDON TIMES, *sent to us by our esteemed correspondent, Mr. P. J. Stirling Boyd, from Edinburgh:*

Most of us, as we draw near to the end of life and its activities—some, perhaps, at earlier stages in our career—are tempted to look back and wonder whether we have made the best use of our time and opportunities; whether, if we could have them over again, we should make a different and better use of them; or whether we might have been more useful or more prosperous in some other career or profession. Like the Psalmist of old when his spirit was vexed, and his heart within him was desolate, we "remember the time past," we "muse upon God's works" in the ordering of our own individual lives.

In such a retrospect there will always be some drop of bitterness: *surgit amari aliquid.* Early promise has not been fulfilled; bright hopes, our own or those of others for us, have come to nothing; others to whom we know ourselves not inferior in ability have passed us in the race for wealth or for high place in Church and State. We are conscious, perhaps, of lacking the qualities of "push" and self-advertisement by which men force their way to the top; we have been handicapped, as it now appears, by our own modesty, by a distaste for courting favors or soliciting patronage, by positive incapacity for "licking the boots" of great people. And so we have missed the goal at which others have arrived.

That is the drop of bitterness in a retrospect of life; and to those who allow it to poison the springs of memory till their old age is soured by disappointment, it may be very bitter indeed. But, after all, are wealth

and high place the only worthy aim of a well-spent life? Is it not possible to avow a distaste for money-making, or an indifference to high position, without inviting the retort that "grapes are sour"? Is it inconceivable that a man of intellect and parts should really prefer "the cool sequestered vale of life"—*fallentis semita vitae*—to the glare of publicity and fierce unscrupulous competition for material rewards? Or that, when the end comes, the retrospect even of success should itself be bitter? Dr. A. C. Benson, in one of his pleasant gossipy books, cites as perhaps the most pathetic of recorded death-bed utterances that of a certain Bishop, whose last words were, "I have held a great position, and have not been equal to it." A melancholy confession indeed! Think of all that perhaps had gone to the winning of that Bishopric, only to end in self-condemnation and confession of failure. Those who have not risen high have at least been spared from such self-mortification, and from the verdict expressed in that biting epigram of Tacitus upon a Roman Emperor that he was "Omnium consensu capax Imperii, *nisi imperasset.*"

The rising unto *Place* is laborious; And by Paines men come to greater Paines; And it is sometimes base; and by Indignities, Men come to Dignities. The standing is slippery, and the Regresse is either a downe-fall, or at least an Eclipse, which is a Melancholy Thing.

So wrote Francis Bacon in his essay "Of Great Price"; and there can be no better testimony to the uncertainty that dogs the retrospect of even outwardly successful lives, or to the ups and downs of success itself. Retrospect of life may carry with it thoughts of what we should or might do could we have it over again. But what do we mean by this—beginning over again with, or without, the lessons of experience? If without them, we should probably do much what we have done, with the same success or failure, the same mistakes, the same aspirations, except so far as different environment might condition our ideas and conduct. A new life *plus* the experience of an earlier life—that surely is a vain speculation, upon any theory of transmigration of souls. But is any life, however prosperous and happy on the whole, worth living over again with its sorrows, its failures, and its sins? The answer is surely, No. We have our exits and our entrances upon the stage of life; we play our parts, well or ill as the case may be, and leave the stage to others, with no thought for ourselves but that of the Publican's prayer, "God, be merciful to me, a sinner." As we reach the end of our appointed span and look back on life, we shall not want it over again, though we would have it spared as long as may be for those whom we love and to whom we are dear.

But retrospect, if it is to be profitable, must have regard to moral and spiritual rather than to temporal and material issues. We need to remember what we have been more than what we have done, for it is the spirit in which we have done such work as has fallen to us that will be appraised by the Judge. If conscience tells of duty done, in however

obscure a sphere, or of one small corner of the earth, in which our life's work has lain, left a little better than we found it; if we have cheered those whose lot in life is hard, not by indiscriminate and demoralizing doles, but in a true spirit of Christian charity, if by voice or act or pen we have helped others as opportunity offered—

Helping, when we meet them,
Lame dogs over stiles,

then, it may be, a retrospect of the least eventful life will bring peace at the last, with the gracious verdict, "Inasmuch as ye did it unto one of the least of these My brethren, ye did it unto Me."

COMMUNITY ORAL HYGIENE

In a four year demonstration of community oral hygiene in the Mulberry district of New York by the New York Association for Improving the Condition of the Poor, the work was at first confined to children, and emphasis was placed on prophylaxis. It was considered essential to the program that (1) there be prophylactic cleanings of the teeth of children at least once a year, and twice a year if possible, for children in the first five grades of school; (2) unsavable diseased teeth be extracted to put the mouth in a hygenic condition; (3) prophylactic fillings, to prevent decay, be provided in all first permanent molars and reparative fillings in all first molars; (4) nitrate of silver be used to arrest decay in deciduous teeth, which are retained the longest. The demonstration began in October, 1919, in a public school with a full-time dental hygienist. In the following January, a dentist was secured on half time, and by June the work had developed so that a dentist with executive ability was needed to direct the staff. The staff now consists of two full-time dentists, two half-time dental hygienists, and a supervisor. The association has made four annual surveys of the teeth of children in Public School 106, where the most intensive work has been done. There has been a reduction from 85.4 to 46.4 per cent in the number of children who required fillings, and the proportion needing extractions has been reduced from 40.5 to 32 per cent. About 3,000 children have been served each year in the dental clinics, but about 1,200 of them have received intensive care. The gross per capita of this work for the first year that complete records were available was $4.17; in the following year it had been reduced to $3.79, and during the last year it was $3.99. The increase is due, in part, to extending this service to preschool children, which involved a considerable loss of time because of unkept appointments. It seems reasonable to conclude, the report continues, that a dental service of this kind costs about $4 per child reached. The demonstration has proved that a dental service carried on as an integral part of the daily school program produces the most lasting results, and that when the dental clinic is in the school building, children can be sent directly from the schoolroom to the clinic with a minimal waste of time and minimal confusion. There was a hearty cooperation of school officials which could hardly have been secured if the clinic had not been in the school building.

The Medical Clinics of North America. New York Number, July, 1924. W. B. Saunders Co., Philadelphia. Price $12.00 net.

This is the New York number and is of special excellence. Among the contributors we note Harlow Brooks, Albert R. Ladd, Herman O. Mosenthal, Walter L. Niles, Russell L. Cecil, Blake F. Donaldson, Arthur L. Holland, Foster Kennedy, H. E. B. Pardee, Lucius D. Stevenson, Harold J. Wiener and others representing Columbia University, Bellevue Hospital Medical College, Cornell University and all the leading hospitals, and post-graduate schools. Among the many interesting subjects treated we note cases of spinal cord tumor, multiple Sclerosis, chronic gall bladder disease, diabetes, pyelitis, the treatment of obesity, etc.

Goiter: Nonsurgical Types and Treatment. By Israel Bram, M. D., Instructor in Clinical Medicine, Jefferson Medical College, Philadelphia, Pa.; Member of the Society for Study of Internal Secretions, etc. The Macmillan Company, New York. Price $6.50.

Dr. Bram has written a great deal on the subject of goiter, and we are more than pleased to read his investigations on goiter, particularly nonsurgical types and their treatment. It must be conceded that certain cases of goiter, especially Graves' disease in some cases, can only be helped by surgery. Others, and in our opinion the majority of cases of this type, can be handled more satisfactorily by the physician. It is, however, a most difficult matter to decide which is which, and it taxes the ingenuity of both the surgeon and the medical man.

The book before us goes into the matter deeply and in a very satisfactory way. It carries out the author's division of goiter cases as follows: (1) Goiters preventable. (2) All early goiters are preventable. (3) Thyroidectomy is a failure in a large percentage of cases operated upon. (4) A large percentage of goiters surgically treated are perfectly amenable to nonoperative procedures. In short, all cases of goiter are either surgical or nonsurgical, and we agree with the author that the majority belong to the latter kind. We will not go into the various divisions of goiters as our readers are familiar with this common place disease. It is sufficient to say that this book considers the physiology of the thyroid, diagnosis and classification, pathology and subdivisions of goiters, etiology of exophthalmic goiter, symptoms of the circulatory system, nervous symptoms, prognosis, prevention, diet, treatment, etc. The larger part of the work is devoted to Graves' disease. A number of case histories, and a large

number of pictures of patients before and after medical treatment, add greatly to the interest and value of the book. We are very much charmed with this work and believe that every physician, particularly, should get a copy and study it most carefully, with the greatest possible benefit to his patients, both as regards preventive treatment as well as curative measures. We indorse it most cordially in every sense of the word.

DIABETES, ITS TREATMENT BY INSULIN AND DIET. A Handbook for the Patient by Orlando H. Petty, P.S., A.M., M.D., F.A.C.P., Professor of Diseases of Metabolism, Graduate School of Medicine, University of Pennsylvania; Physician in Charge of Department of Metabolism, Philadelphia General Hospital; Physician in Charge of Department of Diabetes, Memorial Hospital; Visiting Physician to Memorial Hospital, Philadelphia. Published by F. A. Davis Company, Philadelphia, Pa. Price $1.50 net.

We are now favored with a large number of handbooks on Diabetes and the new Insulin treatment and diet. Some are intended for the patient, some for the physician and some for both. The one before us by Professor Petty of the Graduate School of Medicine, University of Pennsylvania, with a foreword by Professor John B. Deaver, is intended for the layman. It is a book of about one hundred pages and contains all that is essential for the intelligent layman to know. It deals with the question of food and diet, the technique of administering Insulin at home, sample menues, receipts, and a table showing the content of protein, fat and carbohydrates in the commonly used foods. It can be recommended without hesitation to any intelligent individual.

FERTILITY AND STERILITY IN HUMAN MARRIAGES. By Edward Reynolds, M.D., Boston, Mass., and Donald Macomber, M.D., Boston, Mass. With a section on the determining causes of male sterility by Edward L. Young, Jr., M.D., Boston, Mass. Illustrated. W. B. Saunders Co., 1924. Price $5.00 net.

The authors state from a number of observations that the average per cent of sterile marriages is not lower than 10 per cent and probably not higher than 13 per cent. Considering general economic conditions, the fact that populations are increasing rapidly and the tillable ground remains the same, further considering that epidemic diseases which used to sweep the globe causing deaths of millions of human beings have now been practically done away with, as for instance, yellow fever, typhoid fever, smallpox, etc., and still further considering that hygienic measures have increased longevity and finally considering the fact that it is only a matter of time until the earth will be over-peopled, with consequent untold misery, we express our belief in the Malthusian doctrine and wish that the sterility rate were 90 per cent instead of 10 per cent.

Only this week Professor Henry P. Fairchild of New York University stated at the Institute of Politics as follows: By the end of this century, at the rate of increase in the years immediately preceding the world war this country would have one-third again more people than China has now, with one-fourth less land. By the middle of the next century the population of the United States would equal that of the whole world today.

As far as we can see, the only sensible country in the world is France, which has practically a stationary population which accounts for the satisfaction a Frenchman experiences in remaining in his beloved country without the necessity of emigration. However, as this takes us away from our duty to review the book, we must say that for the benefit of those benighted people who want to do their share in increasing the population, this book will give all the necessary information. Though it is not very startling as far as treatment is concerned and is somewhat verbose, we still can recommend it to those interested in the literature on the subject.

ANESTHESIA. By James Tayloe Gwathmey, M.D., First President of American Association of Anesthetists, Anesthetist to the New York Skin and Cancer, Columbia, and Peoples Hospitals, Fellow American Medical Association and the New York Academy of Medicine. With collaborators on special subjects. Illustrated. Second revised edition. The MacMillan Company.

Gwathmey's classic on anesthesia appears in the second revised edition. As heretofore it is the best work in print on the subject of anesthesia. It goes into every detail connected with the subject and as the author well says, certain subjects in connection with anesthesia which were considered radical at one time have now become commonplace.

The author has a number of collaborators, some of whom we will mention. Professor Willis D. Gatch, A.B., M.D., of Indiana University School of Medicine, Indianapolis, Ind., who writes on "Rebreathing in Anesthesia"; Professor Charles A. Elsberg, A.B., M.D., University of Bellevue Hospital Medical College, New York, Attending Surgeon Mount Sinai Hospital, and New York Neurological Institute, who writes an interesting article on "Anesthesia by Intratracheal Insufflation"; Professor Hermann Printz, M.D., D.D.S., of Thomas W. Evans Museum and Dental Institute, School of Dentistry, University of Pennsylvania, Philadelphia, Pa., who writes on "Local Anesthesia as Applied in Dentistry"; our townsman, Dr. Arno B. Luckhart, Ph.D., M.D., professor of physiology, University of Chicago and Rush Medical College, describes his investigation in "Ethylene Anesthesia"; Dr. William Francis Honan, M.D., F.A.C.S., Attending Surgeon to the Fifth Avenue, Flower and Metropolitan Hospitals, Department of Public Welfare, New York City, treats of "Intravenous

Anesthesia"; Dr. Walter S. Sutton, A.B., A.M., M.D., F.A.C.S., late Associate Professor of Surgery, University of Kansas School of Medicine, Attending Surgeon Bell Memorial Hospital, Kansas City, Mo., has an article on "Anesthesia by Colonic Absorption of Ether and Oil"; John W. Crim, L.I., L.L.B., former assistant United States Attorney, and former Special Assistant Attorney-General of the United States, handles the subject of the "Medico-Legal Status of the Anesthetist."

In addition to all these subjects mentioned every other detail in relation to anesthesia, ether, ethyle-chloride, nitrous-oxide, chloroform, etc., selection of anesthetic for specific operations; anesthesia by ether vapor; oil ether, colonic; anesthesia during the world war; painless child birth; and many other interesting subjects are handled in a splendid manner by the distinguished author. Oil ether, colonic anesthesia is now used the world over and will continue in popularity in the exact ratio of a better understanding of its value, likewise spinal analgesia and intravenous anesthesia. The author states that one leading surgeon in the United States performed over 55 per cent of all major operations under peripheral anesthesia. He no doubt refers to Dr. Crile. The chapter on local anesthesia is of great interest.

In short, the book is of intense interest from cover to cover, and no surgeon and no one directly or indirectly interested in anesthesia can afford to be without a copy of this splendid edition.

Rhus Dermatitis (Poison Ivy). Its Pathology and Chemotherapy. By James B. McNair. University of Chicago Press. Price $4.00.

This deeply interesting and very detailed description of Rhus Dermatitis is a classic and deserves due recognition for the immense amount of valuable time put into this, to the sufferers at least, very painful topic. The distinguished author describes in detail the history of rhustoxicondendron, its morphology, origin, occurrence, transmission, chemistry, pathology, differential diagnosis, treatment, etc. As this plant has such a wide distribution, causing untold suffering to legions of human beings, it behooves every physician to make a study of the subject so as to provide for its prevention as well as its cure. This book deserves earnest attention on the part of our readers.

State Board Questions and Answers by R. Max Goepp, M.D., Professor of Clinical Medicine at the Philadelphia Polyclinic. Fifth edition, thoroughly revised. Philadelphia and London. W. B. Saunders Company, 1923.

The fifth edition of this valuable book is a great improvement in many ways over all previous issues. First, the mechanical makeup; by using thinner paper the book is only two-thirds the size of the last edition, better paper and better printing. It has been thoroughly revised and brought up

to date, a number of additions have been made throughout the book, and it remains as before a veritable encyclopedia of medical and surgical lore, not only valuable to the candidate for State Board examinations but also for ready reference in all matters pertaining to Chemistry, Anatomy, Physiology, Pathology, Materia Medica and Therapeutics, Medicine, Surgery, Obstetrics, Gynecology, and Hygiene. We know of no better book in this regard to refresh one's memory on all these subjects.

THE GALL-BLADDER: ITS PAST, PRESENT AND FUTURE. The Mutter Lecture of the College of Physicians, Philadelphia, December 7, 1923. By J. E. Sweet, A.M., M.D., Sc.D. Professor of Surgical Research, University of Pennsylvania, Philadelphia. (Reprinted from the March, 1924, *International Clinics.*)

In the PAST of the gall-bladder Sweet has reviewed its embryology, pointing out as the striking developmental fact that the gall-bladder arises as an independent unit from the same group of ancestral cells as give rise to the stomach, duodenum, pancreas and liver.

Under the PRESENT of the gall-bladder, the author reviews the gross and microscopical anatomy of the gall-bladder, emphasizing particularly the unusual blood and lymph-supplies of the organ and the existence of two valve-like structures at the outlet of the gall-bladder. The writer also calls especial attention to the existence along the bile-ducts of out-pouchings of the mucosa, known to the old anatomists, but apparently forgotten by the modern generation, which seem to possess the functional possibilities of accessory gall-bladders.

In the FUTURE of the gall-bladder, is discussed the possible functions of the organ. Experiments upon the relation of the gall-bladder to the cholesterol of the blood are cited.

Sweet concludes that the gall-bladder is an organ for absorption and that this function is in some way connected with the problem of cholesterol absorption. His view of the function of the gall-bladder is expressed in the sentence, "whatever passes into the gall-bladder through the cystic duct never passes out again through the cystic duct."

In the death of Dr. O. W. McMichael the Chicago Tuberculosis Institute has lost a valued friend.

Dr. McMichael has been for years a member of the Board of Directors of the Institute. He has been interested in the various phases of the program throughout Cook County and every community provided with a health center owes much to this interest. As one of the most noted tuberculosis specialists in the United States, Dr. McMichael has been very influential on the medical staff.

Mrs. Theodore B. Sachs, superintendent of the Chicago Tuberculosis Institute, feels that all those who are friends of the Christmas seal and familiar with its work will note this loss with deep regret.

John Crerar Library Open Evenings.—The board of directors of the John Crerar Library, Michigan Avenue and Randolph Street, announce that through the generosity of friends of the library they were able to resume the evening service on and after September 8, and that until further notice the library will be open every weekday from 9 a. m. to 10 p. m., except Thanksgiving Day, Christmas, New Year's and July 4.

Commission on Crippled Children.—The Kentucky Crippled Children Commission, authorized by an act of the last legislature, opened its headquarters at Louisville, September 19. This is said to be the state's first step toward the rehabilitation of its crippled children. The commission will hold its first meeting in the State Board of Health Building, October 6. The members comprise John E. Sullivan, Covington; Mrs. H. G. Reynolds, Paducah; N. P. Bloom, Louisville; Ben Williamson, Ashland, and Richard J. Colvert, Lexington.

New System to Obtain State Nurses.—Because of a shortage of nurses and the impossibility of nurses who pass state board examinations remaining in state hospitals, Maryland has developed the practical nurse, the first class of the Training School for Practical Nurses at the Springfield State Hospital, graduating September 24. Said to be the first of its kind in the country, this class is not prepared to pass state board examinations but is equipped to take charge of wards in hospitals for mental disease.

University Installs Stethophone.—It is reported that the University of Michigan Medical School, Ann Arbor, has installed a stethophone, an instrument designed to transmit heart and lungs sounds so that many persons can hear them simultaneously. The instrument will be in charge of Dr. Louis M. Warfield and Dr. Frank N. Wilson, professor and associate professor, respectively, in the department of internal medicine. It was obtained through an appropriation passed at a special meeting of the executive committee of the board of regents in July, and will be permanently installed in the amphitheater of the new University Hospital.

Hospital News.—The new receiving and diagnostic building of the Veterans' Bureau Hospital at Perry Point, Md., was dedicated September 27. Dr. Arthur P. Herring, state commissioner of mental hygiene, was the principal speaker. This is the first of a group of seven buildings to be erected at a cost of about $1,000,000 for mentally disabled World War veterans which will accommodate about 1,000 patients. This government hospital will be second in size only

to St. Elizabeth's Hospital for the treatment of mental disorders, Washington, D. C. Dr. Charles A. Barlow is medical officer in charge.——The entire staff and the patients of Sydenham Hospital (the Baltimore hospital for contagious disease) were transferred, September 26, to the new hospital at Montebello, marking the completion of the municipal hospital at a cost of about $900,000. The new hospital will have facilities for 110 patients. Dr. Birckhead McGowan is the superintendent. The old Sydenham Hospital has been turned over to the supervisors of city charities to be used as a part of the Bay View group.

Diseases Under Investigation.—The Hospital of the Rockefeller Institute for Medical Research, New York, confines its work to selected cases that bear on a limited number of subjects chosen for investigation. In order that suitable patients may be referred to the hospital by physicians and others interested who are willing to cooperate, selected patients suffering from the following diseases will be admitted to the extent of the hospital facilities and no charges will be made for treatment, room, board or any other service: (1) chickenpox; early cases, either children or adults; (2) nephritis; young persons, particularly those with edema, are especially suitable; (3) rheumatic fever; patients should be referred early in the course of the disease, and those suffering from various complications are desired; (4) acute pulmonary infections; (5) cardiac disease; patients having completely irregular pulse and fibrillation of the auricles are especially desired.

Higher Obstetric Standards.—The American Gynecological Society, the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, and the American Child Health Association have joined in a movement for better maternal welfare. These organizations believe that the excessive death rates among mothers and infants in this country can be reduced and that "obstetrics may be again placed on the plane with internal medicine and surgery, . . . as one of the three great branches of the healing art," through a general improvement in obstetric standards. To this end, they ask that state and county medical societies emphasize the subject of obstetrics and encourage discussions in the programs of their meetings.

Typhoid Fever in Manila.—Various committees have been appointed in the last few years in the Philippine Islands for the study of typhoid fever and their recommendations have in the main been followed in Manila. The Journal of the Philippine Islands Medical Association says, however, that the typhoid situation appears to have shown no abatement. The disease has gradually become endemic, increasing the specific death rate from 29.47 in 1910, when Heiser studied its prevalence in the Philippines and formulated measures for its control, to 100.09 per thousand population in 1922. The death rate dropped in 1923 to 88.85 per thousand. Measures requiring the chlorination of green vegetables, the prohibition of the sale of shellfish, the pasteurization of carabou's milk, the supervision of drinking water and foods served in hotels and restaurants have been adopted. In 1923, there were 523,000 persons vaccinated against this disease so that about two-thirds of the population of Manila may be considered as having been inoculated with typhoid vaccine within the last two years. This journal states that "the 200,000 inoculated gave about 10 per cent of cases while the 100,000 uninoculated furnished about 90 per cent." Typhoid vaccine would seem therefore to have decreased the incidence among these people many times. The recent appointment by the director of health of a new committee to investigate the typhoid situation gives further hope of improvement. The Bureau of Science and the U. S. Army Medical Research Board will cooperate with the committee with reference to the laboratory side of the investigation.

MODERN THERAPY *and* NOTICES

THE TREATMENT OF DISEASES CAUSED BY STAPHYLOCOCCI AND IN PARTICULAR OF FURUNCULOSIS BY MEANS OF STANNOXYL

The Staphylococcus—Its Action, Its Domain

The staphylococcus, the most widespread of all the pathogenic microbes, appears under the microscope as an invariably round coccus, arranged in more or less important masses. It lives in the skin, the mucous, and the digestive tube of man.

Although its action is generally limited to the superficial regions and the sub-cutaneous cellular tissue, it sometimes provokes deep suppuration. It is met with in most cutaneous and sub-cutaneous abscesses and phlegmons, but it also appears in acute *osteomyelitis* of youths—that furuncle of the bone—according to Pasteur's genial term. Very often associated with other microbes it increases and prolongs their virulence and J. Courmont in his treatise on Bacteriology recognizes as its province the most varied diseases, ranging from benign juvenile *acne* to *pulmonary bacillosis.*

To mention only the affections of which it is the exclusive generator we should name *acne styes* (*hordeola*), *abscesses of the breast, lymphangitis of nurses* and especially *furunculosis* and *anthrax.*

Furunculosis is a real disease constituted by the multiplication, on the surface of the skin, of the insignificant blotch, which was bedecked by a furuncle. It may become really serious owing to the frequency and obstinacy of its attacks or the poor state of health of the individual.

Once the furuncle is opened it becomes exceedingly contagious and the patient not only re-inoculates himself with new elements, but may even contaminate those round him through contact, etc. When furuncles are massed on a small surface they may become the starting point of an anthrax, which is the invasion of the sub-cutaneous cellular tissue by the staphylococcus.

Anthrax is more or less dangerous according to its location or the patient's state of health; its prognostic is very reserved especially if the patient is simultaneously suffering from diabetes. In former days it belonged to the exclusive province of surgery but it may be the origin of a general infection of the organism by the staphylococcus.

Staphylococcia or rather *staphylococcaemia* in fact, is in most cases

consequent on a local lesion (furuncle, anthrax, angina caused by staphylococci, osteomyelitis) which being developed on a weakened field enables the micro-organism to enhance its virulence, to become generalized and thus create pyohæmia. It is a serious affection and may cause death through visceral complications by striking in turns at the heart, the liver and the kidneys.

Old Treatments of Furunculosis. Discovery of the Bactericidal Properties of Tin. Stannoxyl.

Until recent years, many treatments have been tried against furunculosis but without appreciable or regular success. The popular remedy of beer-yeast the efficacy of which is very unreliable provokes intestinal troubles. Sulphur, benzo-naphtol have not given better results. The colloidal preparations only exert a temporary action on this notoriously relapsing disease. Auto-vaccines themselves which constitute the most active treatment against the staphylococcus are difficult and expensive to employ. Their use necessitates a laboratory installation and the most accurate technique.

Therapeutics therefore possessed no really specific means of attack against the staphylococcus until the time when Dr. Gregoire, struck by the fact (well-known in Beauce) that tin workers never suffer from furuncles, undertook first experimental and then clinical researches on the physiological and bactericidal action of tin. He was assisted in his work by M. Frouin, a chemist at the Pasteur Institute. The Beauce remedy of "Tin powder against boils" empirically used has become in consequence of their studies, the very scientific product called Stannoxyl.

It is a mixture of chemically pure tin-oxyde and metallic tin and is now recognized as the specific remedy for diseases caused by staphylococci and particularly for furunculosis. Evidence of this has been furnished by numerous experiments (1).

Experimental Researches

The following are the results of laboratory research according to the reports made by R. Gregoire and A. Frouin to the French Academy of Sciences and the French Academy of Medicine, and according to A. Frouin's article in the Presse Medicale of 12th July, 1917.

Physiological Action of Metallic Tin and Oxyde of Tin

The effect of tin on the nutrition of animals has first of all been carefully verified.

Dogs have absorbed for 20 days a daily dose of 2 grammes of metallic tin or tin oxyde.

This experiment carefully carried out proved that: 1° the absorption of tin by the organism solely depends on the dissolving power of the digestive juices, and is through this very fact and from a certain dose, independent of the quantities taken ; 2° Obsorption by the digestive tube

is very rapid, elimination through urine slow, and consequently the therapeutic action is lasting. The organism can be kept under the action of the medicament for a minimum of four weeks after it has ceased to be taken.

The Action of Tin and Its Compounds on the Development and Virulence of the Staphylococcus

What are the *antistaphylococcic* properties of tin and its products? The addition of protochloride, iodide, metallic tin or tin oxyde to the nutritive broth before sterilization diminishes the abundance of the cocci obtained in an anaerobian medium. After the third or four passage only a scarcely appreciable development can be observed if the sowings are renewed every 48 hours.

In broths, to which 1 percent of lactose, maltose, glucose, or levulose is added, only slight differences are observed in the microbian development of anaerobian cultivations. Such is also the case in the ordinary broth of aerobian cultivation.

Consequently a difference is observed in the action of tin salts on the development of staphylococcus according to the conditions of cultivation and the constitution of the medium. But in all cases the virulence of the microbe *is considerably diminished.*

The experiments in fact show that animals injected with the same dose of cultivation made in presence of salts of tin have survived four, seven and eight days longer than the controls.

Curative Effect of Tin and Its Compounds on Experimental Septicaemia Casued by the Staphylococcus

With the object of demontrating the therapeutic effect of tin MMrs. Gregoire and Frouin have injected animals with virulent staphylococci by means of intravenous injections. Twelve hours later, these animals were treated with intraperitoneal injections of tin salts. In the case of the rabbit, which is extremely sensitive to the staphylococcus, death was retarded 4, 7 and 8 days by one single curative injection.

Such are the *experiments, faithfully summarized* carried out on the biological and therapeutical properties of tin and its products.

Conclusions

Before taking up the study of their action in human therapeutics, let us set forth the practical conclusions derived from experimental facts:

1° *Absolute innocuity.*

2° *Rapid absorption by the digestive tube.*

3° *Slow elimination by which the effect of the medication is prolonged beyond the period of ingestion.*

4° *Uselessness of massive doses.*

5° *Considerable decrease in the virulence of the staphylococcus cultivated in presence of tin and its salts.*

6° *Curative action of tin and its salts on the rabbit injected with virulent staphylococci.*

Clinical Observations

The numerous clinical observations happily confirm the laboratory conclusions, and *Stannoxyl* owing to its constant efficacy, its absolute innocuity and the simplicity of the way it is administered proved to be a powerful medicament for all diseases caused by the staphylococcus and especially for furunculosis.

As early as 1917, at a time when we did not yet possess the material means of giving *Stannoxyl* its tablet form, Dr. Marcel Perol could speak about it, in his thesis for the Medical Doctorship, in the following terms:

Stannoxyl may be taken at any moment of the day in the vehicle which the patient prefers.

It often happens that the patient stops the treatment before absorbing the ten prescribed packets as he appears to be completely cured after the fifth or sixth day.

In general this is what takes place: from the second day, for the growing elements prurience ceases completely; for the adult elements inflammation becomes attenuated; the sensation of burning and tension decreases. The third or fourth day the mature furuncles collapse, become pale and their base is softened; those which had already reached the nucleated or "cory" stage immediately resorb their cores and suppuration ceases. A crust is very rapidly formed which drops off after the eighth or tenth day, leaving a normal cicatrix.

This is not the description of an exceptionally favorable case, but that of the usual evolution of a normally intense furuncle.

For an incipient attack with rare disseminated elements things generally follow their course even more rapidly; in three or four days all is over.

It is only fair to say that it has sometimes been necessary to continue the treatment until the fifteenth day before obtaining a definite resolution.

All the clinical trials proved that *Stannoxyl* is always perfectly tolerated by all patients; 50 to 100 grammes have been absorbed without the slightest inconvenience. A prolonged treatment can therefore be instituted in particularly obstinate cases.

It is equally precious in secondary infections when the staphylococci having disappeared, the virulence of the microbes with which they were associated decreases and allows the organism to recover its powers.

Stannoxyl—Its Various Forms

The *Robert and Carrière Laboratories* were the first to realize the interest attaching to the researches of MMrs. Gregoire and Frouin on the bactericidal property of tin with respect to the staphylococcus. They have done their best to propagate its use by presenting it under a practical form, namely the *Stannoxyl* tablets.

Trustworthy!

The extent to which innumerable practitioners of medicine are today employing

Gray's Glycerine Tonic Comp.

(Formula Dr. John P. Gray)

whenever a dependable reconstructive tonic is called for, tells in no uncertain way of its therapeutic utility and gratifying efficiency.

During the thirty-five years this reliable tonic has been at the service of the profession, the quality of its ingredients and the unvarying character of the composite product have been consistently and faithfully maintained.

Thus it is easy to understand why the host of medical men who have learned how reliable it is in its character and results, not only take pains to order the original Gray's Glycerine Tonic Comp. (P. F. Co.), but also to see that their patients get no other!

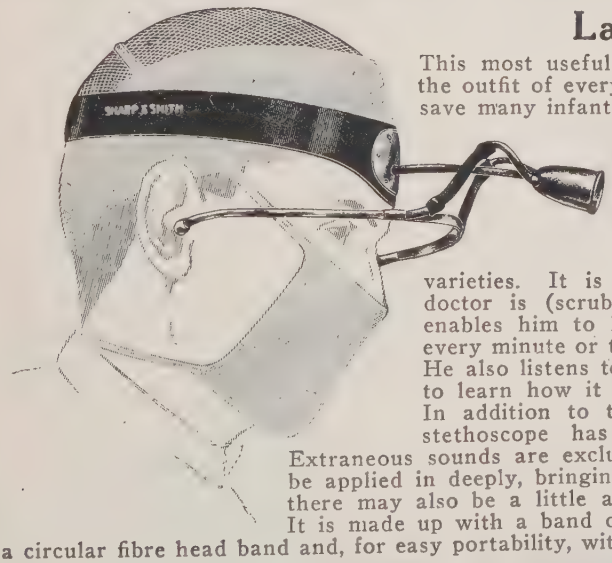
Such care is well worth while, for it often measures the difference between success and failure.

The Purdue Frederick Co.

135 Christopher St., New York

The De Lee-Hillis Head Stethoscope

Latest Model



This most useful instrument should be part of the outfit of every obstetric practitioner. It will save many infants' and mothers' lives.

It was designed especially for use during the second stage of labor of both (spontaneous and operative), but it is even more useful for all the purposes of a stethoscope than the usual varieties. It is worn on the head after the doctor is (scrubbed up) for the delivery and enables him to listen to the fetal heart tones every minute or two without infecting his hands. He also listens to the mother's heart frequently to learn how it is bearing the strain of labor. In addition to this great advantage the head stethoscope has valuable acoustic properties. Extraneous sounds are excluded; by pressure the bell can be applied in deeply, bringing it closer to the fetal heart—there may also be a little audition from bone conduction. It is made up with a band over the top of the head, with a circular fibre head band and, for easy portability, with a ribbon woven strap.

Price, $7.50 Each

SHARP & SMITH

General Surgical Supplies

Est. 1844 **65 E. Lake St., Between Wabash Ave. and Michigan Blvd., Chicago, Ill.** **Inc. 1904**

Since 1917 the reputation of *Stannoxyl* has established itself both in France and abroad among the Medical Profession and in the hospitals.

Stannoxyl in fact owes its remarkable efficacy and its undeniable superiority over all similar preparations to the purety of raw material employed. The tin and its oxyde before being delivered for manufacture are controlled with special care by the experimental laboratory of the firm.

Besides the *tablets* the use of which is the most wide-spread, we prepare *Stannoxyl* under different forms.

For external use: gauze, ointment, bath, glycerated, liquid *Stannoxyl.*

For internal use: Cachets, phials.

Liquid Stannoxyl applied in compresses is the indispensable complement of the internal treatment in order to obtain a rapid and certain cure. It may be replaced by the *Stannoxyl gauze* in certain cases. The *Stannoxyl bath* gives remarkable results in generalized furunculosis. The *ointment* is very effective against juvenile acne.

Glycerated Stannoxyl is used especially against the furuncles of the internal ear.

The doctor, therefore, has at his disposal a whole series of products derived from tin, from which he can choose according to the clinical modality of the infection by the staphylococcus: *e. g., acne, hordeola, abscesses of the breast, lymphangitis of nurses, furuncles, anthrax and generalized furunculosis.*

Posology

The daily dose varies from 0.50 grammes to 1 gramme of Stannoxyl *i. e.,* 4 to 8 tablets daily at meal time, with a little water. Ingestion is easy. The small volume of the tablet enables it to be swallowed as it is. On the other hand it breaks down readily in water and may thus easily be absorbed even by children.

The taste and smell can hardly be detected and are not disagreeable. No dietetic regimen is necessary during the course of this medication.

In the case of an open lesion only dry dressings should be applied (Stannoxyl gauze) or liquid Stannoxyl dressings for external use.

The cachets are prescribed in the same doses and are convenient for persons who swallow the tablets with difficulty.

As for the duration of the treatment no hard and fast rule can be fixed. Five or eight days are often sufficient. The only assertion that can be made is that even in serious cases of furunculosis even in obstinate cases that have resisted former treatments for months (auto-vaccination included), not more than twenty days were ever required to obtain the total resorption of the numerous elements.

Whatever its form Stannoxyl always appears to be the specific treatment par excellence of infections due to staphylococci and constitutes the best weapon of the therapeutical arsenal against furunculosis; it arrests the evolution of the disease and definitely prevents its recurrence.

Your little patients
who need whole grains

—Delight them with "Foods Shot From Guns"

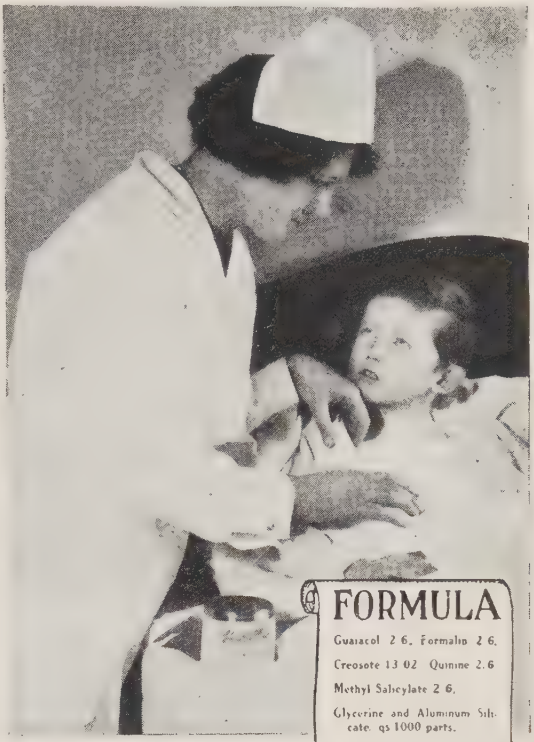
Children who can't be coaxed to eat the usual cereal dishes revel in Quaker Puffed Wheat and Puffed Rice.

Each kernel is a confection with the flavor of nutmeats. But—such wholesome, nutritious confections, whole grains puffed to eight times normal size, every food cell broken to insure quick, easy digestion and assimilation.

Quaker Puffed Grains can be served in an almost endless variety of enticing ways. With sugar and cream, floated in bowls of milk, with fresh or canned fruit. As a between-meal treat, mothers offer a bowl buttered and salted like popcorn.

Adults also like Puffed Grains served these same ways. For the brain-worker they make a sleep invoking bedtime dish which puts no strain on the digestion.

Quaker Puffed Wheat
Quaker Puffed Rice



FORMULA

Guaiacol 2 6, Formalin 2 6,
Creosote 13 02 Quinine 2 6
Methyl Salicylate 2 6,
Glycerine and Aluminum Silicate qs 1000 parts.
Aromatic and Antiseptic Oils qs

For Pneumonia, Pleurisy and All Inflammatory Conditions

Pneumo-Phthysine
TRADE MARK

This emplastrum is so particularly efficacious in the treatment of conditions ranging from common cold to pneumonia —which are encountered at this time of the year—that it has come to be regarded as a regular resource of the physician.

PNEUMO-PHTHYSINE keeps the pain and fever under control. It brings about a gradual downward movement of the temperature. As the medicaments are absorbed by the endermic route, there is no digestive disturbance.

PNEUMO-PHTHYSINE is so simple to use, so positive in action, and has such a wide application in all febrile conditions, that you should submit it to clinical trial at once. A jar of the preparation for this purpose will be mailed free upon request.

PNEUMO-PHTHYSINE is not an advertised product. Its use is promoted in an ethical manner. Your prescription pharmacy will verify this.

PNEUMO-PHTHYSINE CHEMICAL CO.
220 West Ontario St. Dept. C.M.R. Chicago, Ill.

Heredity

District Visitor—"What a well-behaved little boy yours is, Mrs. Blobbs."

Mrs. Blobbs—"Yes, just like his father. My husband always gets a few weeks taken off his sentence for good conduct.—*Ideas* (London).

Enterprise

Official—No, I can't find you a job. I have so many people here after jobs that I can't even remember their names.

Applicant—Couldn't you give me the job of keeping a record of them?—*Catholic News.*

The Case Distinguished

Free State Patrol—"Have ye yer permit on ye for dhriven' the cyar?"

Motorist—"I have that. Are ye wantin' to see ut?"

Free State Patrol—"What for would I be wantin' to see ut if ye have ut? It's if ye had ut not that I'd want a look at ut."—*Washington Star.*

Paste This in Your Hat

"Don't git faultfindin' on a hot day," said Uncle Eben. "Remember de other folks ain' no more 'sponsible foh de weather dan you is."—*Washington Star.*

Too Fresh

"What's the matter?"

"I wrote an article on fresh milk, and the editor condensed it."—*Pelican.*

Estimate of the Jury

A certain lawyer had found the witness difficult to manage, and finally asked whether he was acquainted with any men on the jury.

"Yes, sir," replied the witness; "more than half of them."

"Are you willing to swear that you know more than half of them?" demanded the lawyer.

"Why," retorted the witness, "if it comes to that, I'm willing to swear that I know more than all of them put together."—*Harper's Magazine.*

The Other Way Round

"Was your landlady indignant when you asked her for another month's rent?"

"On the contrary, old man, it was I who was put out."—*Chaparral.*

Oats and Milk

—the "Better Breakfast"

IT'S the ideal health breakfast—oats and milk—and the most savory, if Quaker Oats are served.

For *Quaker* means quality. The large, tender flakes give an extra tempting, rich yet delicate flavor to the morning porridge.

The calories, proteins and minerals which make oats one of the most valuable of all cereal foods are offered in the form of a dainty. When you urge mothers to serve oats, tell them to be sure these oats are *Quaker*.

Quaker Oats are flaked from the finest grain grown—from big, plump kernels selected for super-quality. We get only about 10 pounds to a bushel. That's why culinary experts always say *Quaker* when they order oats.

Standard full size and weight packages—
Medium: **1¼ pounds;**
Large: **3 pounds, 7 oz.**

Quick Quaker

Quaker Oats

Cooks in 3 to 5 minutes

The kind you have always known.

THERAPEUTIC TIP No. 10

THE RECTAL SUPPOSITORY FORMS A NECESSARY PART OF THE TREATMENT OF MANY IN-OPERABLE CASES OF HEMORRHOIDS, FISSURE, FISTULA, PROCTITIS, PRURITUS, ETC.

MICAJAH'S
Suppositories

EXERT ASTRINGENT, ANTISEPTIC, STYPTIC, ANTIPHLOGISTIC, SOOTHING AND HEALING ACTION AND EFFECT, ARE NON-NARCOTIC, NON-IRRITANT, ETHICALLY ADVERTISED TO THE MEDICAL PROFESSION, THEIR USE IS STEADILY INCREASING AMONG PHYSICIANS WHO DEMAND THE MAXIMUM OF RESULTS. MICAJAH'S SUPPOSITORIES ARE ECONOMICAL TO USE.

Sample, literature and interesting booklet, "Pioneers in American Medicine" on request.

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GENUINE
GLUTEN FLOUR

Guaranteed to comply in all respects to standard requirements of the U. S. Department of Agriculture.

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THE FARWELL & RHINES CO.
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SAL HEPATICA
LAXATIVE and ELIMINANT

Efficacious in all conditions where intestinal sluggishness arising from functional derangement of the liver and portal circulation is a factor. Sal Hepatica cleans the entire alimentary canal.

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(AMERICAN PLAN)

EXCELSIOR SPRINGS, MISSOURI

Set in a beautiful ten-acre park this exquisite, modern, fire proof Hotel affords an atmosphere of luxury and restfulness seldom found.

The mineral waters of this famous resort are well recognized as being most efficacious in the treatment of many ailments.

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Write for Booklet No. 50 and analysis of the various water.
Rates Quoted Upon Request

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For Superfluous Hair

The only permanent cure known for superfluous hair, moles, warts, etc. I Positively Guarantee My Work to be Permanent. No Pains or Scars. I use Multiple Electrolysis (many needles), the quickest, cheapest and most reliable of all electric needle methods. Special attention to cases referred to me by physicians.

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Sterile, Antiseptic, Non-Irritant

Use NEET—A bland cream that removes hair without irritating the skin.

In favor with many of the medical profession for depilating in preparation for delivery. Especially valuable if patient insists on home confinement.

Useful in preparation for all abdominal operations or operations on the pubic region.

Indicated where simple ulcers on vulva make shaving difficult and painful.

Relieves patient of the discomfort and risk attending the use of a razor.

Incoming growth is slower to reach the surface than if shaved, and is softer and finer than growth following the use of a razor.

A full size trial tube with complete instructions for use will be mailed without charge to any physician requesting it.

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PLUTO WATER

was a favorite healing potion among the Aborigines of the middle West over two centuries ago. From far and near they gathered to test its potency. Today, it

IS known, not locally, but universally, as an eliminant and a mild purgative, indicated in all disorders of the alimentary tract. Mild and effective in action, leaving in its wake no untoward results. PLUTO is in every sense

A PHYSIOLOGICAL REMEDY It assists nature in restoring metabolic order out of intestinal chaos.

Sample and literature to the medical profession on request to the

FRENCH LICK SPRINGS HOTEL COMPANY, French Lick, Indiana

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X-RAY DEPARTMENT—most modern and completely equipped, including the interpretation of an Expert Roentgenologist, if desired, with Twenty Years Experience.

DRUGS AND MEDICINES analyzed for Strength—Purity—Composition.
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COMBINES the delightful qualities of effervescence with the well-known digestive properties of Peptenzyme.

The powerful and effective action of Peptenzyme, supplemented with the tonic and refreshing effects of effervescence, thus insures both

PERMANENT BENEFIT AND PROMPT RELIEF

in gastralgia, nervous and fermentative dyspepsia, flatulence, atonic indigestion, and to relieve the gaseous fermentation that usually causes so much discomfort in digestive disorders.

It is palatable to the nth degree and gives the physician a cooling and refreshing beverage, free from any hint of medicine, yet pregnant with therapeutic value.

Converts the Distresses of Indigestion into a Smile

SOMETHING NEW

PEPTENZYME EFFERVESCENT GRANULES

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When Sedative Action Is Imperative

especially under conditions requiring avoidance of stomach disturbances or those ill effects common to most bromides,

PEACOCK'S BROMIDES

will be found invaluable.

It is the foregoing that has made this preparation so uniformly dependable in all acute and chronic conditions needing sedative action, or in those cases where bromides require administration over long and continued periods.

A Sluggish Liver

must not be neglected in acute or chronic ills, or disaster is certain. Innumerable are the cholagogues used and recommended, but most of these have the drawback of exciting too active catharsis.

CHIONIA

is the one stimulant of the hepatic functions that will produce its effect without at the same time setting up too great bowel activity.

It is easy to understand, therefore, how the obvious advantages of Chionia have given it the wide range of use it enjoys in countless gastric, hepatic and intestinal conditions.

PEACOCK CHEMICAL COMPANY, St. Louis, Mo.

Sanmetto

ALWAYS a SOOTHING and CORRECTING influence

throughout the Urinary Passages

For URETHRITIS—CYSTITIS—PROSTATITIS

AND

For collateral use in general practice to alleviate

PAINFUL MICTURITION

Write for literature and sample. *OD CHEM. CO., 59-61 Barrow St., NEW YORK*

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HEADACHES

Bowel Inactivity

calls for efforts that not only will empty but restore as promptly and satisfactorily as possible, the physiologic action and tone of the intestinal tract. To accomplish this

PRUNOIDS

has no superior. Absolutely free from irritating effect, this ideal laxative never gives rise to griping or extreme peristalsis, but through its stimulation of natural processes, produces as near to normal--or physiologic--evacuations, as may be possible.

The "Limping" Heart

is at once supported and regulated by the systematic use of

CACTINA PILLETS

Thus employed Cactina gradually improves the nutrition and tone of the heart muscle, restores the cardiac rhythm and renders the heart more resistant to irritating influences.

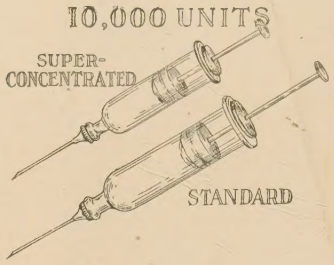
Cactina is a true cardiac tonic without cumulative effect.

SULTAN DRUG COMPANY

St. Louis, Mo.

The prudent practitioner, being guided by the dictates of experience, relieves himself from disquieting uncertainty of results by safeguarding himself against imposition when prescribing
ERGOAPIOL
(Smith)
The widespread employment of the preparation in the treatment of anomalies of the menstrual function rests on the unqualified indorsement of physicians whose superior knowledge of the relative value of agents of this class stands unimpeached.
By virtue of its impressive analgesic and antispasmodic action on the female reproductive system and its property of promoting functional activity of the uterus and its appendages, Ergoapiol (Smith) is of extraordinary service in the treatment of
AMENORRHEA, DYSMENORRHEA
MENORRHAGIA, METRORRHAGIA
ETC
ERGOAPIOL (Smith) is supplied only in packages containing twenty capsules. DOSE: One to two capsules three or four times a day. Samples and literature sent on request.
MARTIN H. SMITH COMPANY, New York, N. Y., U. S. A.

Three Essentials



Super-Concentrated Diphtheria Antitoxin

For curative treatment and immunization of contacts.

An Antitoxin of very low protein content, small bulk, highly refined, which minimizes serum sickness and is rapidly absorbed.

Less bulk—Less pain—Quicker results.

DOSAGE—1000, 3000, 5000, 10,000, 20,000 units.

Supplied in Mulford Perfected Syringes, ready for immediate use.

Diphtheria Toxin-Antitoxin Mixture

To produce a lasting immunity, which develops in about eight weeks and continues effective for some years, probably for life.

Immunization of children of pre-school age and up to 10 years is recommended.

DOSE—3 injections of 1 cc each, at 7-day intervals.

Supplied in packages containing

3-1 cc vials (1 immunization).
30-1 cc vials (10 immunizations).
10-cc vials (3 immunizations).
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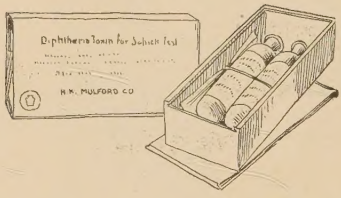

Schick Test Toxin

To determine susceptibility to diphtheria.

DOSE—0.1 cc injected between the layers of the skin.

Supplied in packages containing sufficient material for 50 tests.

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